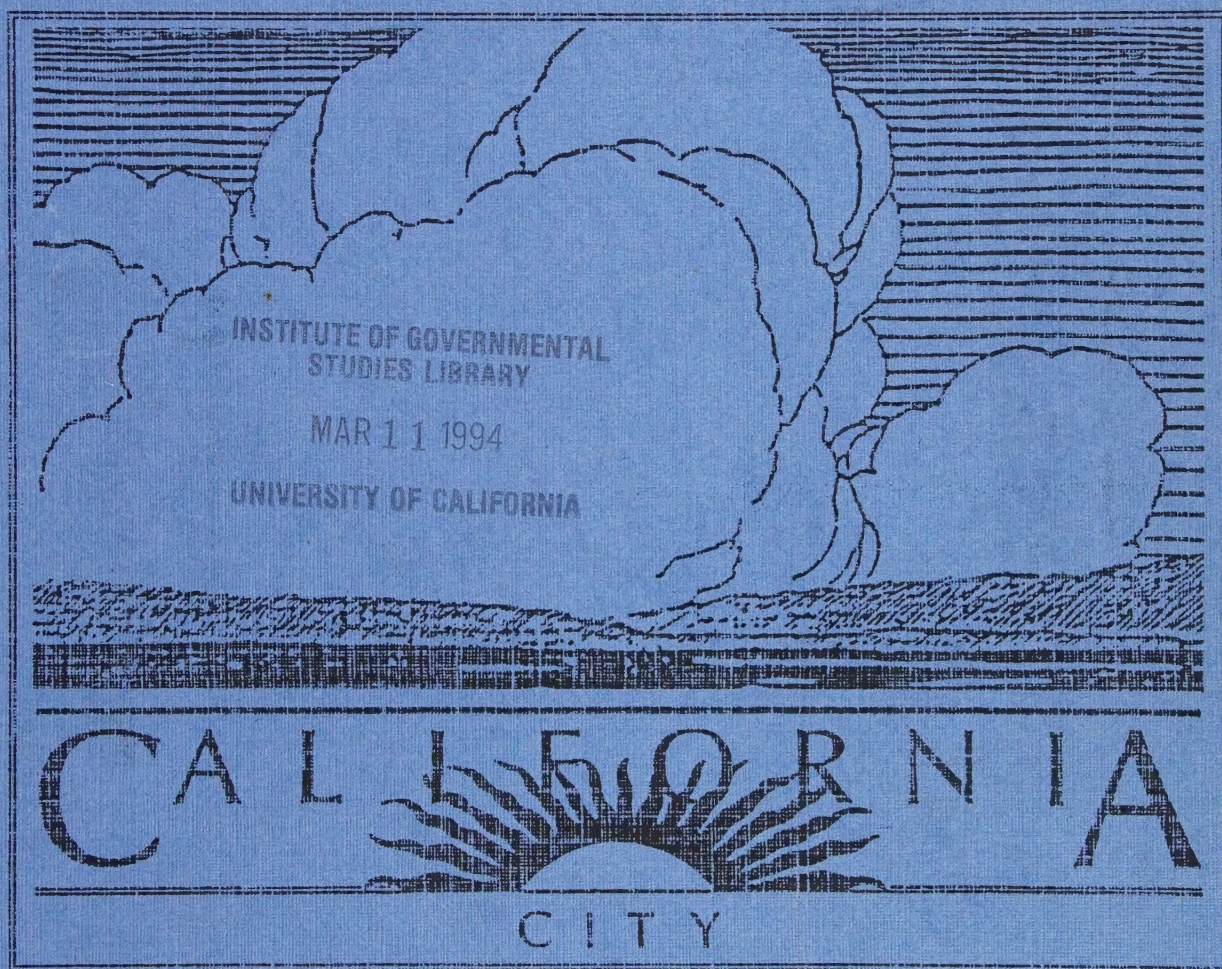


CALIFORNIA CITY GENERAL PLAN



GENERAL PLAN 2012

LAND USE • CIRCULATION • OPEN SPACE • CONSERVATION
SAFETY • NOISE

94 00263

GENERAL PLAN 2012
LAND USE • CIRCULATION • OPEN SPACE
CONSERVATION • SAFETY • NOISE

CITY OF CALIFORNIA CITY


Adopted By
The City Council
Of
California City
August 17, 1993

ENVIRONMENTAL IMPACT REPORT
Resolution No. 8931512
SCH # 92062069

GENERAL PLAN UPDATE
Resolution No. 8931513

TABLE OF CONTENTS

SECTION	PAGE
100	GENERAL PLAN INTRODUCTION 1
101	SCOPE AND PURPOSE 1
102	PLANNING AREA 1
103	PLANNING PERIOD 1
104	PLAN FORMAT 2
105	COMMUNITY PROFILE 2
200	LAND USE ELEMENT 12
201	INTRODUCTION 12
202	DETERMINANTS OF CHANGE 12
202-01	Growth Indicators 12
202-02	Limits to Development 16
203	DEVELOPMENT POLICIES 17
203-01	Land Use Element Objectives 17
203-02	Land Use Designations 18
203-03	Urban Growth Management 22
300	CIRCULATION ELEMENT 26
301	INTRODUCTION 26
302	STREET AND HIGHWAY CIRCULATION SYSTEM 26
302-01	Introduction 26
302-02	Goal 28
302-03	Objectives 28
302-04	Policies 28
302-05	Street and Highway System 30
302-06	Analysis of Street and Highway System 31
303	BIKEWAY TRANSPORTATION SYSTEM 32
303-01	Introduction 32
303-02	Goal 33
303-03	Objectives 33
303-04	Policies 33
303-05	Bikeway System 35
303-06	Analysis of the Bikeway System 35
304	PUBLIC TRANSPORTATION SYSTEM 35
305	RAIL TRANSPORTATION SYSTEM 36
306	AIR TRANSPORTATION SYSTEM 36
400	HOUSING ELEMENT (Separate Document)



Digitized by the Internet Archive
in 2025 with funding from
State of California and California State Library

<https://archive.org/details/C124912186>

500	OPEN SPACE AND CONSERVATION ELEMENTS	37
501	INTRODUCTION	37
502	GOALS	43
503	OBJECTIVES	44
504	POLICIES	44
600	SAFETY ELEMENT	46
601	INTRODUCTION	46
602	OVERALL OBJECTIVES OF THE SAFETY ELEMENT	46
603	FLOOD HAZARDS	46
603-01	Introduction	46
603-02	Goal	47
603-03	Objective	48
603-04	Policies	48
604	GEOLOGIC HAZARDS	48
604-01	Introduction	48
604-02	General Description of Geologic Hazards Within Planning Area	48
604-03	Goal	50
604-04	Objective	50
604-05	Policies	50
605	FIRE HAZARDS	51
605-01	Analysis of Fire Hazards and Fire Protection Services	51
605-02	Goal	51
605-03	Objective	52
605-04	Policies	52
606	SEISMIC HAZARDS	52
606-01	Analysis of Seismic Hazards	52
606-02	Goal	53
606-03	Objectives	53
606-04	Policies	53
607	EMERGENCY SERVICES	54
607-01	Introduction	54
607-02	Goal	57
607-03	Objectives	58
607-04	Policies	58

SECTION	PAGE
---------	------

700	NOISE ELEMENT	59
701	INTRODUCTION	59
702	EXISTING AND FUTURE NOISE ENVIRONMENT	61
703	GOALS	70
704	OBJECTIVES	70
705	POLICIES	70
706	IMPLEMENTATION MEASURES	71

APPENDICES

APPENDIX A NOISE AND ITS EFFECTS ON PEOPLE

APPENDIX B REQUIREMENTS FOR AN ACOUSTICAL ANALYSIS

LIST OF TABLES

TABLE NUMBER		PAGE
ONE	HISTORICAL AND PROJECTED POPULATION	6
TWO	POPULATION BY AGE AND SEX	8
THREE	POPULATION FORECAST	13
FOUR	CENTRAL CORE LAND USES BY ACREAGE	14
FIVE	GENERAL PLAN LAND USE DESIGNATIONS	15
SIX	SUMMARY OF DISCHARGES	47
SEVEN	DISTANCE TO L_{db} CONTOURS AND TRAFFIC DATA	65
EIGHT	SUMMARY OF COMMUNITY NOISE SURVEY DATA	69
NINE	MAXIMUM ALLOWABLE NOISE EXPOSURE - STATIONARY NOISE SOURCES	71

LIST OF FIGURES

FIGURE NUMBER		FOLLOWS PAGE
1	REGIONAL SETTING	2
2	CALIFORNIA CITY PLANNING AREA	3
3	SPHERE OF INFLUENCE BOUNDARY MAP	4
4	1992 PLANNING AREA REORGANIZATION	5
5	GENERALIZED EXISTING LAND USE MAP	15
6	GROWTH MANAGEMENT PRIORITY PHASING PLAN	22
7	PARCELIZATION DEFICIENCIES	22
8	REDEVELOPMENT PROJECT AREA	22
9	STREET CIRCULATION MAP	31
10	GENERALIZED BICYCLE ROUTE	34
11	PRIMARY BICYCLE ROUTE	34
12	GROUNDWATER UNITS AND SUBUNITS	38
13	WILDLIFE	41
14	FLOOD HAZARD AREAS	46
15	EROSION HAZARDS	48
16	SLOPE OF TERRAIN	48
17	EARTHQUAKE FAULTS	52
18	EMERGENCY FACILITIES	54
19	SIGNIFICANT NOISE SOURCES AND NOISE MONITORING SITES	61
20	LOCATION OF SUPERSONIC AIRCRAFT	67
21	HOURLY NOISE LEVELS - CATALPA	67
21	HOURLY NOISE LEVELS - ASPEN	67

INTRODUCTION

California City

101 SCOPE AND PURPOSE

A general plan is a comprehensive, long-range policies document, which, when adopted by a city council, comprises the official statement of a city toward the future character and quality of development in the planning area. State planning law (Section 65300 of the California Government Code) requires each city to prepare and adopt a general plan consisting of seven mandated elements: Land use, Circulation, Housing, Conservation, Open Space, Safety, and Noise. The law also provides that a general plan may contain those additional elements which, in the judgement of the planning agency, relate to the physical development of the community.

The California City General Plan is intended to conform with the Government Code sections relevant to the mandatory general plan elements. In addition to containing the mandated elements, the Plan includes certain permissive elements, such as a comprehensive Transportation/Circulation Element which contains non-mandated sections on bikeways, public transit, rail, and air transportation facilities, and truck routes. The Plan provides the basis for establishing consistency between the General Plan and the City Code, entitled "Zoning", as required by Section 65860 of the Government Code.

The policies in this Plan are designed to enhance California City's planning area and existing urban environment. Further, they seek to manage anticipated urban growth and development, so that such growth will have minimal adverse impacts upon the environment, will enhance the stability of the local economy, and will be within the capability of the City and other service entities to provide necessary urban services.

102 PLANNING AREA

The California City planning area is comprised of 130,200 acres (203.44 square miles). This represents an increase of 11,200 acres resulting from a 1992 reorganization that comprised a 16,000 acre annexation and 4,800 acre detachment. The total 203.44 acre planning area also represents the official City limits of California City.

103 PLANNING PERIOD

Although the General Plan is placed within an initial time frame through the year 2012, the Plan may be amended during that period of time. Policy adjustments required by changing public attitudes and differing circumstances can be made to each of the mandatory elements of the Plan as often as four times per year. This opportunity for review and update insures that the Plan can remain current, thus extending its continued effectiveness to the City as an expression of official policies concerning the future.

The General Plan is composed of text and maps. The text identifies and analyzes the principal physical development issues facing the Planning Area, describes Plan proposals, and includes statements of Plan objectives, policies, standards, and definitions. While objectives and policies are presented in the text of the Plan, standards, definitions and general background information are generally found in the Appendices. General Plan implementation methods and procedures are presented as policy statements. The General Plan diagram shows the planned land uses and indicates the street and highway functional classification system. Other descriptive maps and plan maps are also included in the document.

The General Plan is intended to present a clear and concise statement of City policies toward development and to accommodate additions and modifications necessary for future updating. The following numerical codes identify the various sections of the Plan, aid faster reference, and allow for amendment by code section.

- Section 100 is this introduction to the Plan.
- Section 200 is the Land Use Element which describes the projected population and other growth indicators, the limits to development, the urban growth management policies and the agricultural, residential, commercial, industrial, and public land uses and policies.
- Section 300 is the Circulation Element which incorporates the streets and highways, bikeways, public transit, rail, airport systems, and the truck route system.
- Section 400 is the Housing Element.
- Section 500 is the combined Open Space, Conservation Element.
- Section 600 is the Safety Element.
- Section 700 is the Noise Element.
- Section 800 combines the Appendices of all the General Plan Elements.

105 COMMUNITY PROFILE

City History

California City is located in a portion of the Mojave Desert that was occupied by Paiute Indians on a nomadic basis. In 1776, the first explorers came to the area under the leadership of Father Francisco Garces; the Conquistadores are believed to have conducted mining operations in the region using Paiute labor. During a later stage in the exploration of the area, Rogers and Manly are believed to have passed through the area in late 1849 or early 1850 in their attempt to reach



CALIFORNIA CITY
GENERAL PLAN
1992-2012



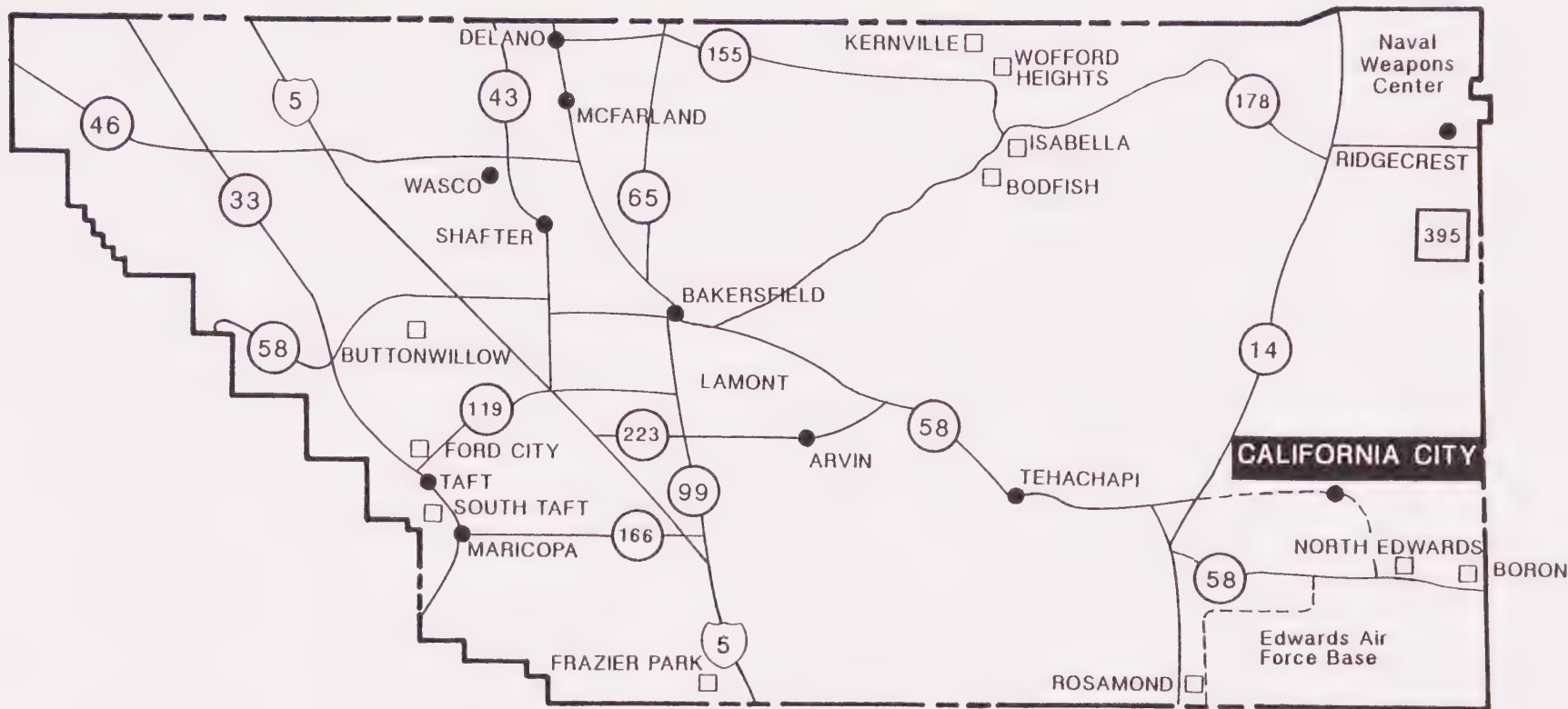
LOCATION MAP



CALIFORNIA CITY
GENERAL PLAN
1992-2012



VICINITY MAP



CALIFORNIA CITY GENERAL PLAN

HOUSING ELEMENT 1992-2012

- UNINCORPORATED
- INCORPORATED
- INTERSTATE HIGHWAY

- STATE HIGHWAY
- US HIGHWAY



REGIONAL SETTING

FIGURE

help for the stranded Death Valley 49'ers, and in the 1880's the 20-Mule Team Trail was created to carry borax ore from Harmony Borax Works in Death Valley to the railhead in Mojave. The road from Randsburg to Mojave became an important local artery for the opening of mines in the Randsburg/Johannesburg area. Sheep farming began around the turn of the century at the Conklin Ranch, located north of the City's present electric substation. Later, generally unsuccessful agricultural operations included alfalfa and cotton production.

In 1958, private land development activities began when a group of developers started buying land in what is now the eastern part of the City, then two farms in the western area. During the 1960's promotional efforts resulted in the sale of home sites to individuals throughout the United States. Community planning commissioned at the time envisioned a revolutionary new city concept and design that would discourage single-family tract development, control architectural quality, and incorporate vast areas of natural desert and farmland open space into a new type of living environment. the economic base of the City was predicated on continuous land sales and development activities, resulting in the employment of a significant portion of the City's population by the land developer. California City was incorporated on December 8, 1965, with a population of 617 persons and a City Council-Manager form of government.

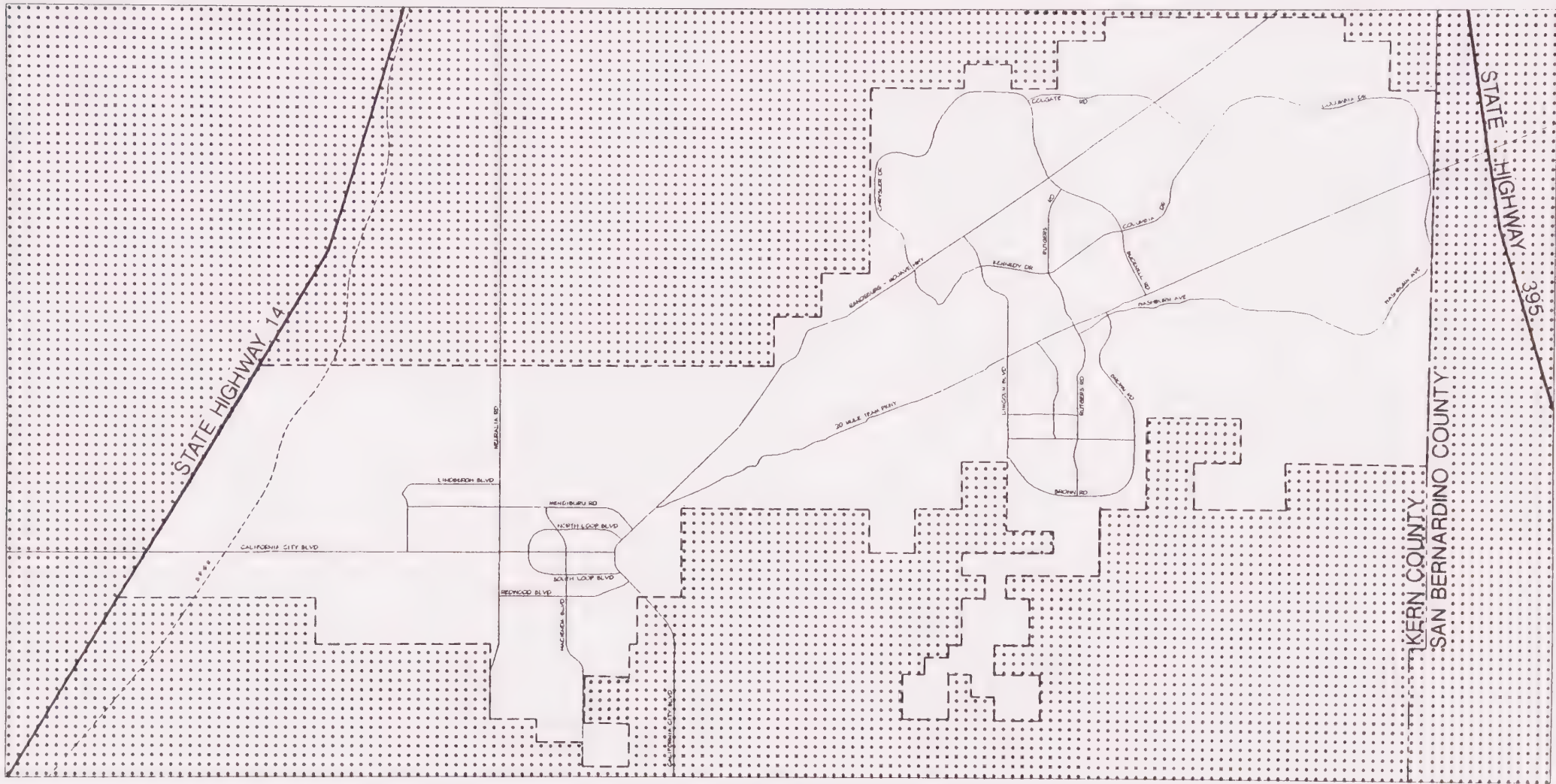
Location and Population

California City is a part of the Antelope Valley, a triangular-shaped plain of 3,000 square miles bounded by the San Gabriel and Tehachapi Mountains on the south and west, respectively, and by the Rand Mountains on the north. The City is surrounded by undeveloped desert, with the only contiguous land having a specific designation being the 25,000-acre Desert Tortoise Preserve administered by the U.S. Bureau of Land Management, and located along a portion of the City's northeastern border.

The principal population centers of the Antelope Valley are Lancaster and Palmdale, which have become largely suburbia extensions of the San Fernando Valley as housing prices forced workers in the Los Angeles Metropolitan Area to seek the more affordable housing offered in the Lancaster-Palmdale area. The population growth has exceeded by very significant percentages, those that had been projected in the last 1970's and early 1980's, and most describe the rate of growth as "phenomenal".


California City is located to the northeast of the Lancaster-Palmdale area and, to a limited extent, has experienced some growth related to the same underlying reason for much of Lancaster-Palmdale's growth...affordable housing.

Nearly all of California City's population resides in the area defined as the "First Community", an area comprising approximately twelve sections of land (7,680 acres) in the southwest corner of the expanses encompassed by the city limits. A very limited amount of development has occurred in the "Second Community", an area located about twelve miles northeast of the "First Community" along the Twenty-Mule Team Road.



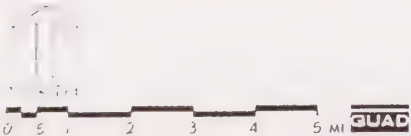
CALIFORNIA CITY GENERAL PLAN

LAND USE AND CIRCULATION 1992-2012

 PLANNING AREA BOUNDARY

CALIFORNIA CITY PLANNING AREA

FIGURE
2



Climate and Air Quality

The high desert climate is characterized by low humidity, low annual rainfall, and wide fluctuations in temperature, with average temperatures ranging from 84.9 degrees in July to 39.9 degrees in December. (NOAA, Climatological Data, Annual Summary: California, 1990) Average annual precipitation has historically been about five inches, with rains occurring primarily during the period from November to March; however, the 1990 Annual Summary of Climatological Data for California compiled by NOAA reports average annual precipitation for the nearby City of Mojave as 1.49 inches. Prevailing winds are southwest (from 240 to 260 degrees), traveling through the Antelope Valley at a mean speed of 6 to 12 knots. Frequent strong winds occur in the spring and early summer months, with extreme velocities reaching 53 to 67 knots.

The Mojave Desert Air Basin is divided into several Air Districts, and California City is currently within the Kern County Southeast Desert Air District; this District is a non-attainment area for ozone and PM10. The Kern County Air District is currently being split into the San Joaquin and High Desert Districts. The non-attainment designation is not expected to change; however, no data is available, as there is currently no monitoring station in this portion of Kern County. (pers. comm., Tom Paxson, Kern County Air Pollution Control District, May 6, 1992)

General Land Uses

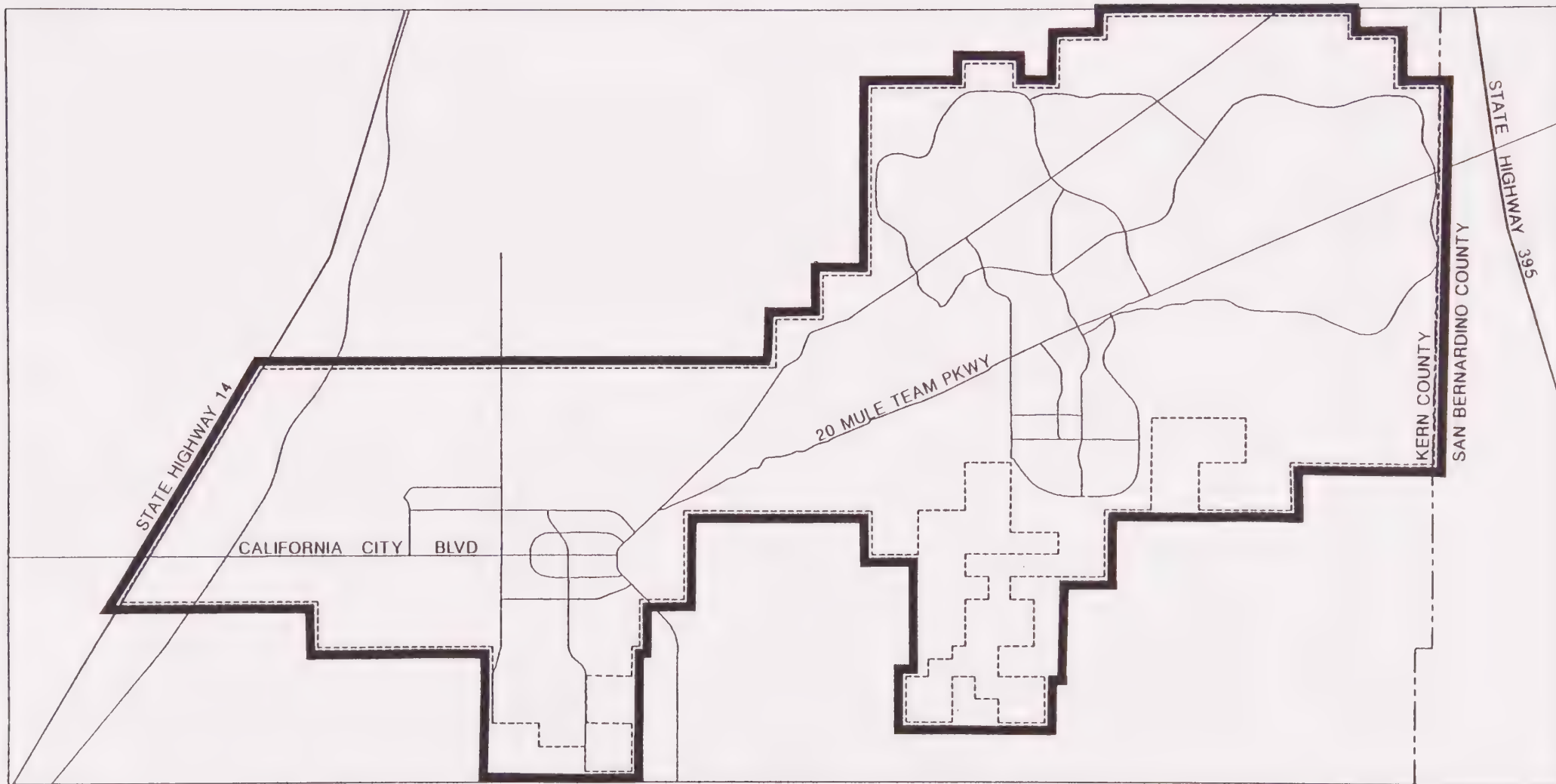
Residential

An inventory of existing structures in the "First Community" completed in 1991 revealed a total of 2,517 single-family residences and 208 multi-family units were present. Thus, of the approximate 19,500 residential lots available in the area defined as the "First Community", approximately fourteen percent contained structures at the time of the physical survey.


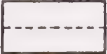
Assuming the average lot size of a single family residence to be 10,000 square feet, and the number of such dwellings to be 2,600 (2,517 were identified in the 1991 inventory), approximately 597 acres within the "First Community" are presently occupied by single family dwellings. Additionally, 208 multiple family units were identified in the 1991 inventory. Assuming there are now 250 multiple family units with an average of three units per complex, and an average lot size of 15,000 square feet, a total of 29 acres are estimated to be occupied by multiple family dwelling units. Thus, present residential land use in the "First Community" totals an estimated 626 acres.

Commercial

Excluding the area at the intersection of State Highway 14 and California City Boulevard, approximately 74 acres within the "First Community" are being utilized for commercial enterprise, including about 30 acres in the area adjoining the airport. Another 15 acres is designated for commercial uses at the intersection of State Highway 41 and California City Boulevard.



CALIFORNIA CITY
GENERAL PLAN
 LAND USE ELEMENT 1992-2012

-  SPHERE OF INFLUENCE
-  CITY LIMITS

**SPHERE OF INFLUENCE
 BOUNDARY MAP**

FIGURE
 3



0 .5 1 2 3 4 5 mi QUAD

Industrial

Although 1,500 Acres are designated in the General Plan for industrial use in the area of the "First Community," there are no active industrial facilities occupying any of those lands.

Public Facilities

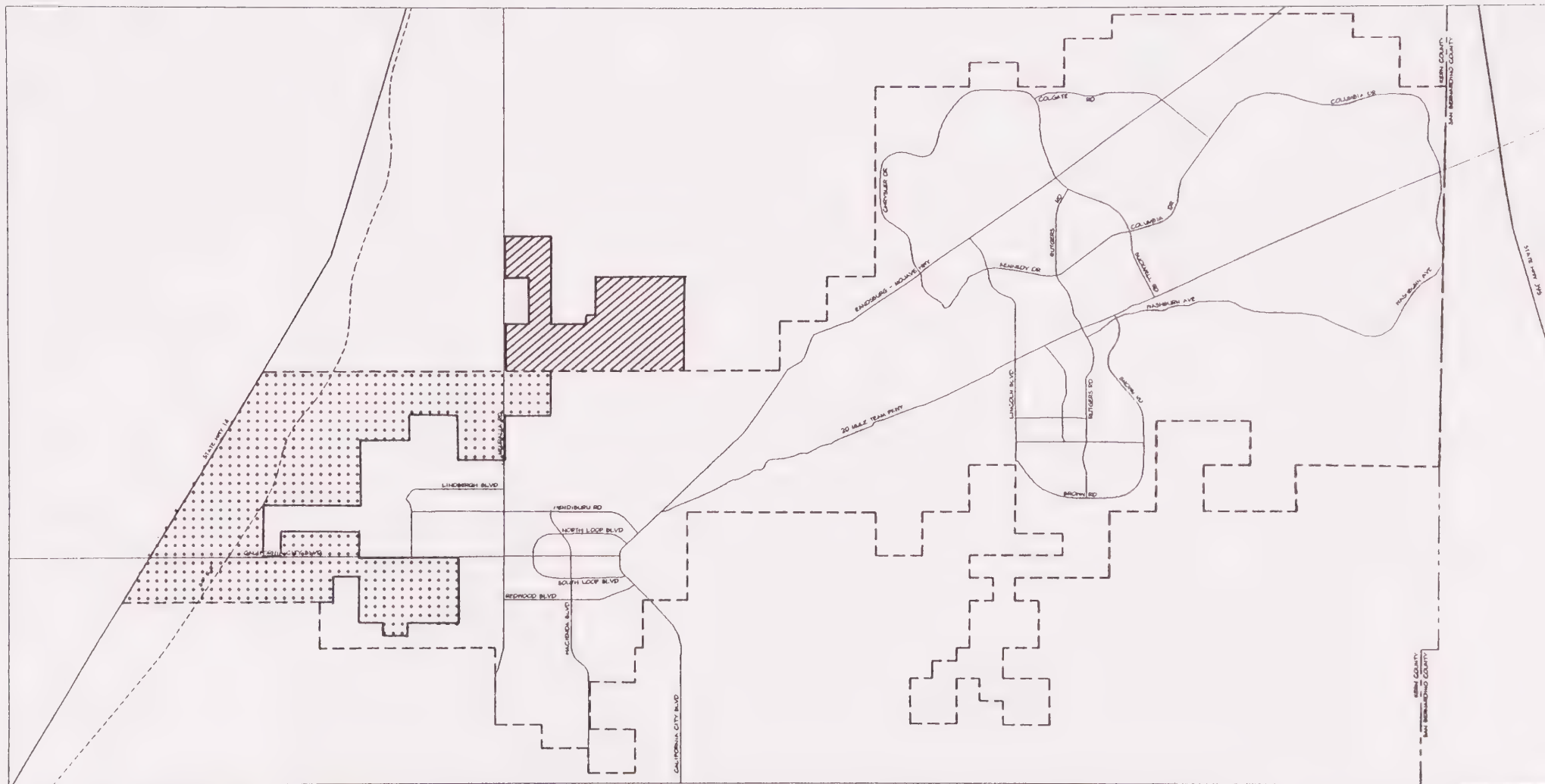
Included in this category are parks, schools, the City Hall complex, golf coursed, etc., together totaling about 90 acres in the "First Community."

Population

Table One shows the historical and projected population and growth rates for California City from incorporation in 1965 to the year 2010. Except for the original doubling of the population from the original 617 persons to over 1,300 five years later, the only notable population growth has been a spurt that emerged in the late 1980's. From 1986 when that growth trend began until 1992, the population increased by 150 percent, from 3,180 to the current estimated population of 7,925. Kern County projections anticipate a slowing of the growth rate over the next two decades, but continued steady rise to a population of nearly 15,000 by 2000 and over 27,000 by 2010.

Many local officials and residents, however, feel these projections by Kern County are conservative and that the population of the community is likely to be significantly higher in the years 2000 and 2010 as a result of at least three influencing factors:

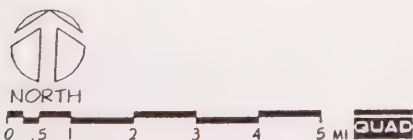
- 1) The continuing growth of the Lancaster-Palmdale area in Los Angeles County and associated escalating costs for housing will cause people to seek the more affordable housing available in California City as well as the benefit of Kern County's favorable property tax rates. To some extent, this movement is already occurring, as evidenced by the near-phenomenal growth of Rosamond, a community just north of the Lancaster-Palmdale area, but in Kern County. Residents living in California City and working in Lancaster-Palmdale face a 25-30 minute commute, which is not considered to be significant by those used to facing much longer commute times in the Los Angeles Basin.
- 2) Edwards Air Force Base will continue to operate at near-existing employment levels at least through the end of the decade, according to base officials. Presently, there are about 5,000 civilian and military personnel assigned to the facility, many of whom do not live in on-base housing. Additionally, another estimated 15,000 workers associated with contractors and vendors serving Edwards AFB live in the Lancaster-Palmdale-Tehachapi area. As housing costs in the former area continue to escalate, base personnel and working families will likely seek more affordable housing in nearby communities. Given the location of California City (about fifteen miles north of Edwards AFB and connected by a major county road), the community is likely to be quite attractive to this group.



CALIFORNIA CITY GENERAL PLAN LAND USE ELEMENT 1992-2012

 DETACHMENT
 ANNEXATION

**1992 PLANNING AREA
REORGANIZATION**



**TABLE ONE
CALIFORNIA CITY
HISTORICAL AND PROJECTED POPULATION**

YEAR	POPULATION	ANNUAL GROWTH RATE
1965	617	
1970	1,309 (1)	112.16 %
1975	2,091 (2)	9.82 %
1980	2,743 (1)	5.58 %
1985	3,096 (2)	2.45 %
1986	3,180 (2)	2.71 %
1987	3,471 (2)	9.15 %
1988	3,757 (2)	8.24 %
1989	4,168 (2)	10.94 %
1990	5,955 (1)	42.87 %
1991	7,181 (2)	20.59 %
1992	7,925 (2)	10.36 %
1995	9,741 (3)	7.92 %
2000	14,800 (3)	8.73 %
2005	20,665 (3)	6.90 %
2010	27,464 (3)	5.85 %

Sources: (1) United States Census. (2) California Department of Finance. (3) Kern County Planning and Development Services, Report P-3-ST-90 May, 1990.

- 3) The industrial growth surrounding the Mojave Airport, located to the southwest of the "First Community", has been quite active in the past five years and is expected to continue for the foreseeable future. The close proximity of California City, with its rural setting, affordable housing and other amenities such as its golf course, etc., is likely to attract the working population associated with the development of industry around the Mojave Airport.

An examination of the age structure of California City's population as determined by the 1990 Census reveals that 31 percent is under the age of 18 years, 57 percent is between the ages of 18 and 59 years, and only 12 percent is 60 years or older. Given the land sale promotional activities of the past, one would surmise that the community's population would be comprised of a large percentage of people of retirement age. As can be seen from the figures just presented, however, the population is actually comprised largely of people of working age and nearly a third of the population are the children of that group.

Because no major industries are located within California City, its employment opportunities are relatively few. Thus, it can be assumed that the majority of the working age population is employed in other communities in the Antelope Valley region. This serves to validate the contention of many officials and local residents that California City is poised for a more significant growth in its population over the next 18 years than that which has been projected by the County of Kern.

Housing

A total of 2,384 housing units for California City was reported by the 1990 Census, 2,119 occupied (89 percent) and 265 vacant; 1,450 units were owner occupied (61 percent). Persons per unit was reported at 2.86 for owner occupied housing, 2.70 for renters; median value for owner occupied housing units was \$84,800, and median contract rent was \$427. City records indicated that the number of building permits issued has increased from about 25 in 1984 and about 60 in 1985 to 171 in 1986, 329 in 1987, 353 in 1988, 568 in 1989, and 821 in 1990.

Transportation/Circulation

California City is located in a triangle of regional arteries: State Highway 14 to the west, turning northeast from the City of Mojave toward Red Rock Canyon and northerly to Inyokern; U.S. Highway 395, located to the east of California City and oriented northwest through Randsburg, Johannesburg, and Red Mountain, connecting with State Highway 14 northwest of Inyokern; and State Highway 58 (Interstate 40), which runs east-west from the City of Mojave through North Edwards and Boron along the northern boundary of Edwards Air Force Base to Barstow and beyond. California City Boulevard intersects State Highway 14 approximately five miles north of Mojave and serves as the western entrance to the community. The 20-Mule Team Road, which interconnects the "First" and "Second" Communities, extends eastward to intersect U.S. Highway 395. However, the easternmost nine miles is graveled, not paved.

TABLE TWO
CALIFORNIA CITY POPULATION
BY AGE AND SEX

1990

AGE GROUP	MALE	FEMALE	TOTAL
0-4	292	262	554
5-9	281	276	557
10-14	257	236	493
15-19	212	187	399
20-24	152	187	339
25-29	304	260	564
30-34	278	331	609
35-39	269	235	504
40-44	231	194	425
45-49	177	152	329
50-54	121	114	235
55-59	127	120	247
60-64	105	104	209
65-69	89	100	189
70-74	60	70	130
75-79	42	48	90
80-84	25	32	57
85+	12	13	25
TOTAL	3,034	2,921	5,955

Source: 1990 Census Summary Tape File 1A.

The local circulation system for California City is extensive, designed by the original developers to serve a large urban population. About half of the nearly 600 miles of roads are paved, the rest graded, and all but the 30 miles of roadway serving the developed western portion of the City is in need of repair. California City Boulevard comprises the main east-west street entering the community from State Highway 14 on the west, serving the Civic Center area, and turning south to join State Highway 58 on the south. The Twenty Mule Team Road extends 20-miles northeast from California City Boulevard and connecting with U.S. Highway 395. Dial-A-Ride is the only service within the City, and the City has arranged for daily bus service to Lancaster beginning in July, 1992, to provide for the medical care and shopping needs of residents. The Dial-A-Ride service operates strictly within the "First Community" and is sponsored by the City with State of California funding. In existence for about nine years, it has three units, all of which are equipped to handle wheelchairs. Sections of California City Boulevard have been designated as bicycle paths.

California City Municipal Airport is located four miles northwest of the Civic Center and serves general aviation. The airport has a 6,000-foot illuminated runway, and airplane hangars. Manufacturing and aviation-related businesses are located nearby.

Public Services and Utilities

Water Supply: At least two studies of California City's domestic water supply have been completed in the past twenty years, the most comprehensive being the one prepared by Krieger and Stewart in 1972. A more recent analysis which did not include any field testing, and is primarily a review of existing data, was completed by Saint-Amand Scientific Services in November, 1991.

All but a few hundred acre-feet of water utilized by California City's population annually is pumped from the underground aquifer. The balance is surface water purchased from the Antelope Valley-Eastern Kern Water Agency (AVEK).

Groundwater Units. The U.S. Geological Survey has delineated the groundwater units in the area of California City. Those that impact the community's groundwater supply are as follows; Chaffee Subunit, California City Subunit (zones 1 and 2), Koehn Subunit, Peerless Subunit and the Rand-Boron Subunit. California City pumps its water entirely from zone 2 of the California City Subunit.

Groundwater units and subunits have commonality of recharge or storage, and in the area of California City, their boundaries are often determined by topographic features and fault lines which run in various directions throughout the area.

The Chaffee Subunit is located in the west of the community and contains several million acre feet of high quality water. It is recharged primarily by water flowing under Cache Creek and Sand Creek, which drain a large area of the Tehachapi Mountains that is subject to relatively high annual precipitation levels. Although only rarely do the two drainages bring surface water

onto the desert floor, there are significant under-surface flows that contribute to the subunit's recharge.

The Muroc Fault divides the Chaffee Subunit from the California City Subunit, and provides a barrier for sub-surface water to move from west to east, even though the water table southwest of the Muroc Fault is higher than that to the east of the fault line. Thus, there is no opportunity for water from the Chaffee Subunit to fill the depression that has been created by past agricultural pumping activities as well as domestic water pumpage in the California City Subunit.

The effect of the Koehn Subunit to the north has a negative effect on the California City Subunit in that groundwater migrates in that direction toward Koehn Dry Lake, the surface collection point in earlier times for water draining from the Tehachapi Mountains, Red Rock and Jawbone Canyons, the El Paso Mountains and Rand Hills. Groundwater contours reveal this natural movement in the direction of Koehn Dry Lake, a movement which is enhanced by the depression in that subunit caused by long-time pumping from the irrigation of alfalfa.

The Peerless Subunit occupies Peerless Valley and receives little or no recharge to the estimated 250,000 acre feet of water that accumulated during the Ice Age. Water pumped from this aquifer is truly being mined and is of marginal quality.

Similarly, the Rand-Boron Subunit has no recharge from the surrounding hills, and although a portion of the Subunit is located within the boundaries of California City, it has little potential to provide a sustained water supply for anything more than a small population.

All but a few hundred acre-feet of domestic water that is utilized by California City's population each year is pumped from the underground aquifer. The balance is surface water purchased by the City from AVEK. Present water usage levels are estimated to be 2,100 acre-feet annually for domestic purposes and 1,000 acre-feet for golf course and park irrigation, as well as lake replenishment.

City wells have a maximum pumping capacity of eight million gallons per day. Present domestic water usage averages 235 gallons per person daily, or a total of 1.86 million gallons per day, exclusive of the irrigation needs previously mentioned. Recoverable groundwater in the unit utilized by California City is estimated to be 2.1 million acre-feet, thus the community has a supply that will last for more than a century, given the present population growth rate of the community.

The groundwater that is pumped by the City is not treated. It is high in dissolved solids and in fluoride content. The AVEK surface water is of lower quality and must be blended with the City's groundwater to reach permitted levels of halomethane concentrations.

Water distribution System: The City's water distribution system is comprised of about 240 miles of steel pipe, 90 percent of which is over 50 years old. According to the City Engineer, the system is fundamentally unsound, deteriorating quickly and immediate steps need to be taken to implement all of the pipe in the system.

Wastewater Treatment: The City's present wastewater treatment facility was constructed in 1978 and has a design capacity of 300,000 gallons per day (gpd). According to the City Engineer, approximately 75-80 percent (225,000 - 250,000 gpd) of the plant's capacity is presently being utilized. More important, however, is the fact that the facility's treatment system does not have the capability to reduce the BOD levels of wastewater discharge to the revised lower levels that have been mandated by the Lahontan Regional Water Quality Control Board.

For these reasons, a new wastewater treatment plant is to be constructed by the City, in the same location of the present facility (about $\frac{1}{4}$ - $\frac{1}{2}$ mile northeast of the "First Community"). The new plant is in the preliminary design stage as this is written, and construction is anticipated to begin in early 1994. The new facility will have a design capacity of 1.0 million gpd, and its design will include providing for tertiary treatment of the wastewater it receives. It is planned that the treated wastewater will be utilized for golf course and park irrigation, as well as lake replenishment, which will serve to eventually reduce the City's groundwater pumpage by at least 1,000 acre feet of water annually.

Social and Economic Factors

California City's history and isolated location combine to create an unusual community. The economic base is relatively limited, with most employment related to civilian aerospace, military installations and mining or small service and retail outlets within the City. There are no major shopping facilities. The airport provides some stimulus to the local economy through related activities. Community facilities include the Robert P. Ulrich Elementary School which is part of the Mojave Unified School District, a middle school under construction, an out-patient medical center and pharmacy, an ambulance service; churches; and City-owned parks and recreational facilities. California City has no hospital or emergency medical treatment facility. For such services, residents must travel to Lancaster or Edwards AFB.

LAND USE ELEMENT

California City

200 LAND USE ELEMENT

201 INTRODUCTION

The Land Use Element anticipates the City's growth and establishes urban development policies and a land use pattern which seek to promote economic development and minimize potentially adverse impacts of development on the environment.

202 DETERMINANTS OF CHANGE

This section of the Land Use Element evaluates the many growth-inducing factors and limits to development which will determine the extent and rate of future urban growth within the California City Planning Area. As such, these factors provide the basis for the plan maps and policy statements which follow both in this and in subsequent elements of the General Plan.

202-01 Growth Indicators

202-01.1 Population

An examination of the age structure of California City's population as determined by the 1990 Census (Tables One and Two) reveals that thirty-one percent is under the age of eighteen years, fifty-seven percent is between the ages of eighteen and fifty-nine years, and only twelve percent is sixty years or older. Given the land sale promotional activities of the past, one would surmise that the community's population would be comprised of a large percentage of people of retirement age. As can be seen from the figures just presented, however, the population is actually comprised largely of people of working age and nearly a third of the population are children of that group.

Because no major industries are located within California City, its employment opportunities are relatively few. Thus, it can be assumed that the majority of the working age population is employed in other communities in the Antelope Valley region. This serves to validate the contention of many officials and local residents that California City is poised for a more significant growth in its population over the next 18 years than that which has been projected by the County of Kern.

Except for the original doubling of the population from the original 617 persons to over 1,300 five years later, the only notable population growth has been a spurt that emerged in the last 1980's. From 1986 when that growth trend began until 1992, the population increased by 150 percent, from 3,180 to the current estimated population of 7,925. Kern County projections anticipate a slowing of the growth rate over the next two decades, but continued steady rise to a population of nearly 15,000 by 2000 and over 27,000 by 2010.

TABLE THREE
POPULATION FORECAST

		6 Percent	8 Percent
1990	⁽¹⁾ 5,955	⁽¹⁾ 5,955	⁽¹⁾ 5,955
1991	⁽²⁾ 7,181	6,312	6,431
1992	⁽²⁾ 7,925	6,691	6,945
1993		7,092	7,501
1994		7,518	8,101
1995	⁽³⁾ 9,741	7,969	8,749
1996		8,447	9,449
1997		8,954	10,205
1998		9,491	11,022
1999		10,060	11,904
2000	⁽³⁾ 14,800	10,664	12,856
2001		11,304	13,884
2002		11,982	14,995
2003		12,701	16,195
2004		13,463	17,491
2005	⁽³⁾ 20,665	14,271	18,890
2006		15,127	20,401
2007		16,035	22,033
2008		16,997	23,796
2009		18,017	25,700
2010	⁽³⁾ 27,464	19,098	27,756
2011		20,244	29,976
2012		21,459	32,374

Source: ⁽¹⁾ United States Census
 ⁽²⁾ California Department of Finance
 ⁽³⁾ Kern County Planning Department, 1990

202-01.2 Land Availability

The land available within the California City planning area, as previously mentioned, is 130,200 acres (203.44 square miles). Despite the large jurisdictional area of California City, the majority of the resident population is located in the First Community's Central Core where municipal infrastructure is readily available and where commercial and institutional land uses are located. The following represents the land uses contained in the Central Core:

TABLE FOUR
CENTRAL CORE LAND USES BY ACREAGE

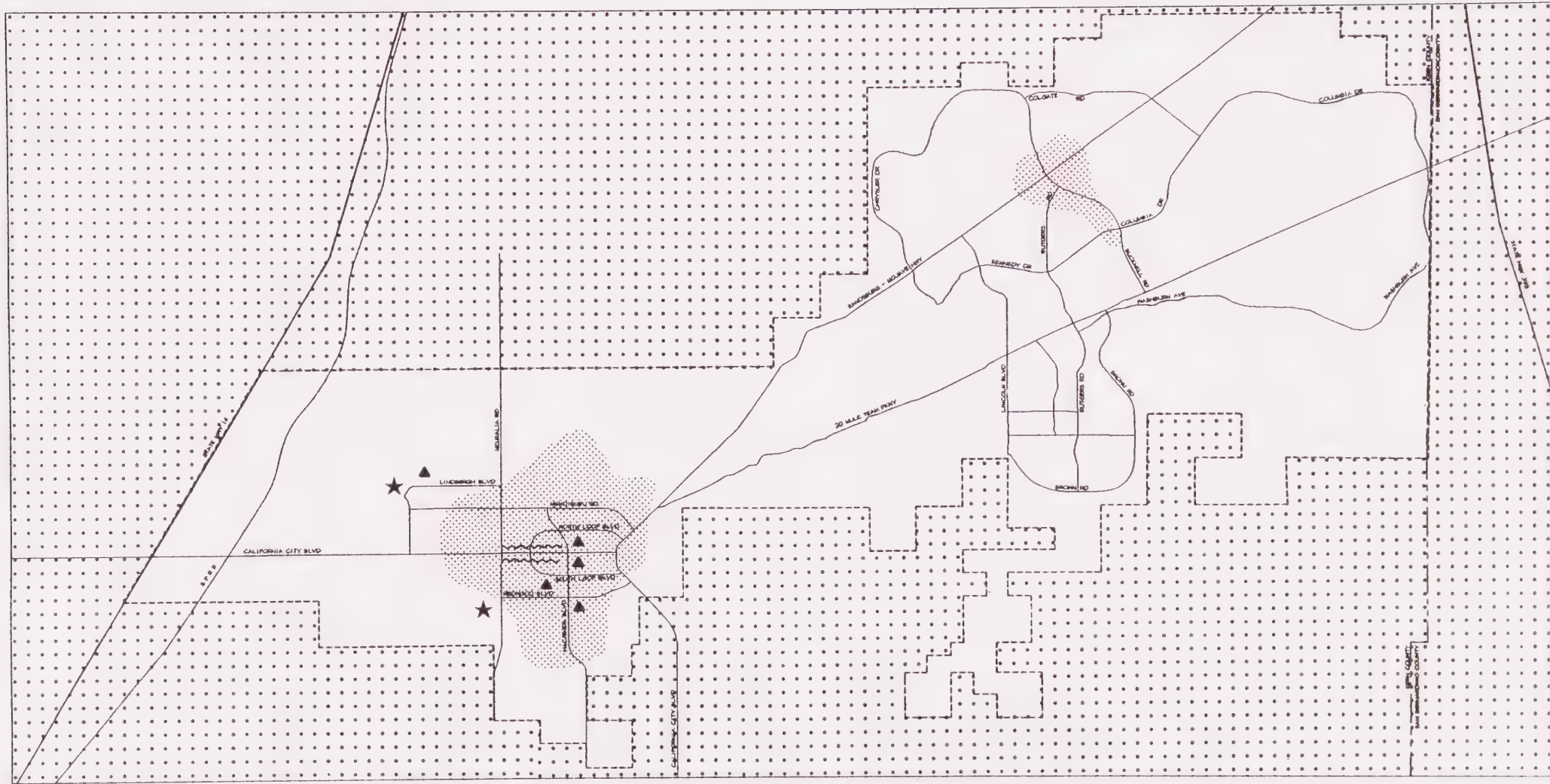
LAND USE	ACRES
RESIDENTIAL	
2-4 D.U./A.C.	95.5
4-8 D.U./A.C.	143.0
8-12 D.U./A.C.	90.9
12-24 D.U./A.C.	10.1
TOTAL RESIDENTIAL	339.5
COMMERCIAL	
COMMUNITY SHOPPING	14.9
HOTEL	8.3
CLUB HOUSE	4.6
MEDICAL CENTER	4.5
RESIDENTIAL/COMMERCIAL 4-8 D.U./A.C.	11.8
TOTAL COMMERCIAL	44.1
INSTITUTIONAL	
CHURCH	8.0
CIVIC CENTER	13.4
CULTURAL CENTER	17.8
CHILD CARE	1.0
TOTAL INSTITUTIONAL	40.2
OPEN SPACE	
GOLF COURSE	159.5
CITY PARK	80.6
TOTAL OPEN SPACE	240.1
TOTAL	663.9

The following land use designations are based upon the total California City planning area as designated on the General Plan Land Use Element Map.






TABLE FIVE

GENERAL PLAN LAND USE DESIGNATIONS

GENERAL PLAN LAND USE DESIGNATIONS	ACRES
MEDIUM DENSITY Single Family Residential 6 D.U./A.C., Sewered 2 D.U./A.C., Unsewered	8,733
MEDIUM-LOW DENSITY Single Family Residential 4 D.U./A.C., Sewered 2 D.U./A.C., Unsewered	544
LOW DENSITY Single Family Residential 2 D.U./A.C.	-0-
RURAL DENSITY Single Family Residential 1 D.U./A.C.	457
ESTATE DENSITY Single Family Residential 1 D.U./2 A.C.	19,880
HIGH DENSITY Multi-Family Residential	3,900
Neighborhood Retail and Office	388
Community and Regional Commercial	350
Light Industrial and Research	920
Industrial	1,013
Controlled Development	90,358
Government (Public Facilities)	117
Conservation Land	2,176
Tortoise Preserve/Natural Resource Preserves	1,360
TOTAL	130,200



CALIFORNIA CITY GENERAL PLAN LAND USE ELEMENT 1992-2012

- | | | | |
|---|-------------|---|-------------------|
|  | RESIDENTIAL |  | PUBLIC FACILITIES |
|  | COMMERCIAL |  | VACANT |
|  | INDUSTRIAL | | |



NORTH

0 .5 1 2 3 4 5 MI. QUAD

**GENERALIZED
EXISTING LAND USE MAP**

FIGURE
5

202-01.3 Governmental Services

California City, a City Council-Manager form of government, provides a full range of urban services including police, fire, sewer, water, airport and park facilities. The County of Kern operates the local library which is located in the Civic Center (see Section 100). The local schools are administered by the Mojave Unified School District. California City has no hospital or emergency medical treatment facility. Those services are available, however, in nearby Lancaster and Edwards Air Force Base.

202-01.4 Employment Base

California City's future growth will continue to be influenced by the continuing urban growth of the Lancaster-Palmdale area in Los Angeles County, expansion of Edwards Air Force Base operations and personnel and industrial growth and development surrounding the Mojave airport (see Section 100, Population). The growth anticipated is directly associated with the availability of affordable housing. As this residential base increases, the opportunities for community economic growth in domestic goods and services also increases. However, significant employment base expansion will only occur with local efforts to attract industrial employment. This objective is identified in the General Plan with an emphasis on promoting industrial efforts that may be airport or business related.

202-02 Limits to Development

California City's potential for future urban growth may be affected by the numerous factors related to physical development of the urban landscape. This includes flood hazard areas, seismic zone (faults), soil/slope hazards and other aspects of land development concerns identified in the Safety Element, Section 600. There are also other issues of physical development that may pose some degree of limitations. These potential limiting factors are as follows:

202-02.1 Subdivision Deferred Agreements

Within the City limits are areas of greatly varying potentials for development. The range extends from the so-called "dry tracts" in which land was sold without promise of any improvements, to lots which are presently served with full utilities.

There are numerous Subdivision Deferred Improvement (SDI) tracts within the City. Two of them, tracts 2898 and 2967, are islands within the built-up areas and the remaining tracts occur in the undeveloped area to the east. The SDI notes have a maturity of up to nineteen years and were designed to pay for the development of water and paved streets.

There are basically two kinds of SDI agreements. Some tracts are covered by a form of agreement which provides for installation of water and pavement "at such time as a need therefor exists". No time frame is stipulated. The other form of agreement, which covers tracts 3281, 3282 and 3288 provides that the City shall install the improvements within ten years from the date of the agreement.

202-02.2 Water Distribution System

The City's water distribution system is comprised of about 240 miles of steel pipe, ninety percent of which is over fifty years old. According to the City Engineer, the system is fundamentally unsound, deteriorating quickly and immediate steps need to be taken to implement all of the pipe in the system.

202-02.3 Wastewater Treatment

The City's present wastewater treatment facility was constructed in 1978 and has a design capacity of 300,000 gallons per day (gpd). According to the City Engineer, approximately 75-80 percent (225,000-250,000 gpd) of the plant's capacity is presently being utilized. More important, however, is the fact that the facility's treatment system does not have the capability to reduce the BOD levels of wastewater discharge to the revised lower levels that have been mandated by the Lahontan Regional Water Quality Control Board.

For these reasons, a new wastewater treatment plant is to be constructed by the City, in the same location of the present facility (about one-quarter to one-half mile northeast of the First Community). The new plant is in the preliminary design stage as this is written, and construction is anticipated to begin in early 1994. The new facility will have a design capacity of 1.0 million gpd, and its design will include providing for tertiary treatment of the wastewater it receives. It is planned that the treated wastewater will be utilized for golf course and park irrigation, as well as lake replenishment, which will serve to eventually reduce the City's groundwater pumpage by at least 1,000 acre feet of water annually.

203 DEVELOPMENT POLICIES

203-01 Land Use Element Objectives

The following is a set of overall objectives for the future land use of the California City Planning Area. They form the basis for the more detailed statements of objectives and policies which are included later under the appropriate sections of the Element.

203-01.1 To ensure the orderly, quality development of the community.

- 203-01.2 To provide for a balanced community, reflecting economic diversity and a pleasant living environment.
- 203-01.3 To encourage quality design of land use developments in both public and private facilities.
- 203-01.4 To ensure that all portions of the community are adequately supported by infrastructure and services.
- 203-01.5 To encourage development patterns and phasing which provides for the logical, sequential and cost-effective extension of infrastructure and services.
- 203-01.6 To promote and facilitate economic growth and diversification.
- 203-01.7 To encourage the development of land uses which will improve the availability of local residents to work, shop and obtain services in California City.
- 203-01.8 To promote development of land uses which would enhance California City's potential appeal as a "destination" recreational community.
- 203-01.9 To ensure that the City's environmental setting, including clean air, open character, lack of traffic congestion, and comparatively low intensity of land uses, is preserved as development of the community progresses.
- 203-01.10 To ensure that land use policy and development in the community are consistent and fully integrated with local goals and policies governing transportation and circulation, housing, public health and safety, noise, conservation and open space.
- 203-02 Land Use Designations

The following is a list and description of the land use designations which are used on the General Plan land use map. The designations are intended to facilitate understanding and minimize the potential for misinterpreting the General Plan.

The designations, to some extent, express policy intentions and are, therefore, reflective of City policy. More detailed discussion of land use policies can be found in the appropriate sections of the Land Use and Conservation/Open Space Elements.

203-02.1 Estate Density Residential

Shall mean land designated for single family detached residential development at a density not to exceed one dwelling unit for each two acres of land. The area known as Wonder Acres has land designated for residential use not to exceed one dwelling unit for each five acres of land.

203-02.2 Rural Density Residential

Shall mean land designated for single family detached residential development at a density not to exceed one dwelling unit for each one acre of land.

203-02.3 Low Density Residential

Shall mean land designated for single family detached residential development at a density not to exceed two dwelling units for each acre of land.

203-02.4 Medium Low Density Residential

Shall mean land designated for single family residential development not to exceed four dwelling units per acre for sewered properties and two dwelling units per acre for unsewered properties.

203-02.5 Medium Density Residential

Shall mean land designated for single family residential development attached or detached housing not to exceed six dwelling units per acre of land.

203-02.6 High Density Residential

Shall mean land designated for single and multiple family residential development attached and/or detached housing from six to forty dwelling units per acre of land.

203-02.7 Neighborhood Commercial

Shall mean land designated for development of commercial retail uses serving a neighborhood area. Limited general office use may also be established in the designation. Such commercial business activities may be a single commercial use or small scale neighborhood shopping center. (Establish C-1 zoning for consistency.)

203-02.8 Community Commercial

Shall mean land designated for a wide range of retail business and compatible commercial services designed to serve the entire community. These commercial uses would be typically concentrated in a unified retail center or master community plan. (Establish C-2 zoning for consistency.)

203-02.9 Commercial/Office

Shall mean land designated for the primary use of administrative, business, medical, professional, and general offices. Limited commercial uses related to office development may also be established. (Establish C-3 zoning for consistency.)

203-02.10 Service Commercial

Shall mean land designated for the primary purpose of high intensity commercial uses related to commercial services and repairing establishments including wholesale/retail related activities. (C-4 zoning shall be established for consistency.)

203-02.11 Regional Commercial

Shall mean land designated for the exclusive establishment of commercial uses which cater to the regional area and traveling public. (C-5 zoning shall be established for consistency.)

203-02.12 Light Industrial and Research

Shall mean land designated for restricted, non-intensive manufacturing, processing, and storage activities which do not have the potential for detrimental impacts on surrounding properties. This land use designation also includes uses such as research/office park developments in conjunction with light industrial use where such locations are compatible with adjacent residential lands. (Establish M-1 zoning for consistency.)

203-02.13 Heavy Industrial

Shall mean land designated for full range of intensive manufacturing, processing and storage activities. (Establish M-2 zoning for consistency.)

203-02.14 Controlled Development

Shall mean land designated for the express purpose of specific land development planning that is consistent with the goals, objectives and policies of the California City General Plan. Strong consideration shall be given to the development of park/open space and public/quasi-public uses which benefit the entire community on those parcels of land which were originally created for that purpose. (See Policy 504.9, Open Space/Conservation Element.)

The Controlled Development category also provides for industrial uses, commercial uses, recreational uses, large lot subdivisions, open space uses, agricultural and horticultural uses. Very low density residential uses (one dwelling unit per twenty acres) may be developed on an interim basis. Further subdivisions of land (of parcels less than twenty

C A L I F O R N I A C I T Y G E N E R A L P L A N 2 0 1 2

GENERAL PLAN LAND USE DESIGNATIONS	CONSISTENT CALIFORNIA CITY ZONING														
	R-1	R-2	R-3	RM-1	RM-2	C-1	C-2	C-3	C-4	C-5	CMC	M-1	M-2	RA	O
Estate Density Residential 1 D.U./Two Acres 1 D.U./Five Acres (Wonder Acres)			●												
Rural Density Residential 1 D.U./One Acre			●												
Low Density Residential 2 D.U./One Acre			●												
Medium Low Density Residential 4 D.U./One Acre (Sewered) 2 D.U./One Acre (Unsewered)		●													
Medium Density Residential 6 D.U./One Acre (Sewered) 2 D.U./One Acre (Unsewered)	●														
High Density Residential 6 D.U. to 40 D.U./One Acre				●	●										
Neighborhood Commercial						●									
Community Commercial							●								
Commercial/Office								●							
Service Commercial									●						
Regional Commercial										●					
Community Medical Center											●				
Light Industrial and Research												●			
Heavy Industrial													●		
Controlled Development	△	△	△	△	△	△	△	△	△	△	△	△	△	●	●
Government (Public Facilities)	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△
Conservation Land														●	●
Tortoise Preserve/Natural Resource Preserves															●

D.U. Dwelling Unit

● Compatible △ Conditionally Compatible

acres in size) and/or the development of uses other than those specified by the General Plan would require detailed plans to be provided by the owner and/or developer of such lands. In the case of residential subdivisions, the General Plan allows a maximum density up to six dwelling units per acre with approval of a detailed plan. Development proposals may be considered and adopted at any time by the City provided that the above detailed plans serve to address the social, environmental and economic concerns of the community which are consistent with the goals, objectives and policies of the General Plan.

All land area within the California City sphere of influence boundary and outside the City Limits boundary shall be designated Controlled Development.

203-02.15 Government (Public Facilities)

Shall mean land designated for the location of governmental and quasi-governmental facilities and services which are necessary to the general welfare of the community. Typical uses include City Hall, fire stations, police stations, wastewater treatment plant, parks and schools.

203-02.16 Conservation Land

Shall mean land designated for the protection, preservation and conservation of unique areas within the California City environs.

203-02.17 Tortoise Preserve/Natural Resource Preserves

Shall mean land designated for the protection and preservation of desert tortoise habitat and unique natural resource lands.

203-02.18 Community Medical Center

Community Medical Center shall mean land designated for major medical treatment facilities, medical care residences, medical offices and other related medical service establishments which are necessary for regional or local medical service needs. (CMC zoning shall be established for consistency.)

203-02.19 Wonder Acres

The recently annexed portion of the community known as Wonder Acres shall remain as conforming uses in the Land Use Element of the General Plan until a master plan or specific plan for the area is adopted through a public hearing process.

203-02.20 Airport Environs

The area of land surrounding the municipal airport environs shall be reserved for future industrial development. A master plan or specific plan of the subject area shall be prepared, processed and adopted prior to any development.

203-03 Urban Growth Management

203-03.1 Introduction

The purpose of the growth management plan is to limit irresponsible actions but without discouraging or penalizing entrepreneurial actions which could have a positive benefit for the City.

Anticipated future population and economic growth in the California City Planning Area will create a demand for additional municipal services such as sewer and water. If unplanned and uncontrolled, such urban growth can cost local government in California City more for additional urban services and facilities than the amount it would receive from new tax revenues.

California City's future urban growth will necessarily require the continued conversion of vacant lands to urban development. However, the policies in this section seek, where possible, to minimize the premature and unplanned conversion of vacant land by recommending the establishment of an urban growth management program designed to assure orderly growth.





One of the City's primary objectives is to encourage steady and broad-based economic growth. To do this, the City must provide for the efficient and fiscally responsible expansion of the service systems, i.e., refuse collection, police and fire protection, etc. Of equal importance is to achieve a favorable cost/revenue balance during development.

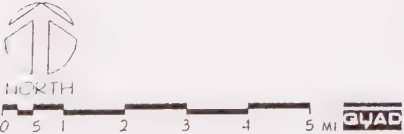
Approximately ninety percent of the subdivided land has been sold and more than ninety-five percent of the total land area remains empty, except for bladed roads and, in some cases, partial utilities. The City also has contractual obligations to extend services beyond the present urbanized area in a manner which will be initially inefficient.

It is recognized that a single development of sufficient size could warrant considerations not appropriate for the random accretion of individual smaller scale actions. It would be possible, for example, for a private developer to contract with the City for a totally planned "Community Core" which may be located in the rural areas. Such an action would require a refined plan for the core area which, after adoption, would become part of the General Plan.



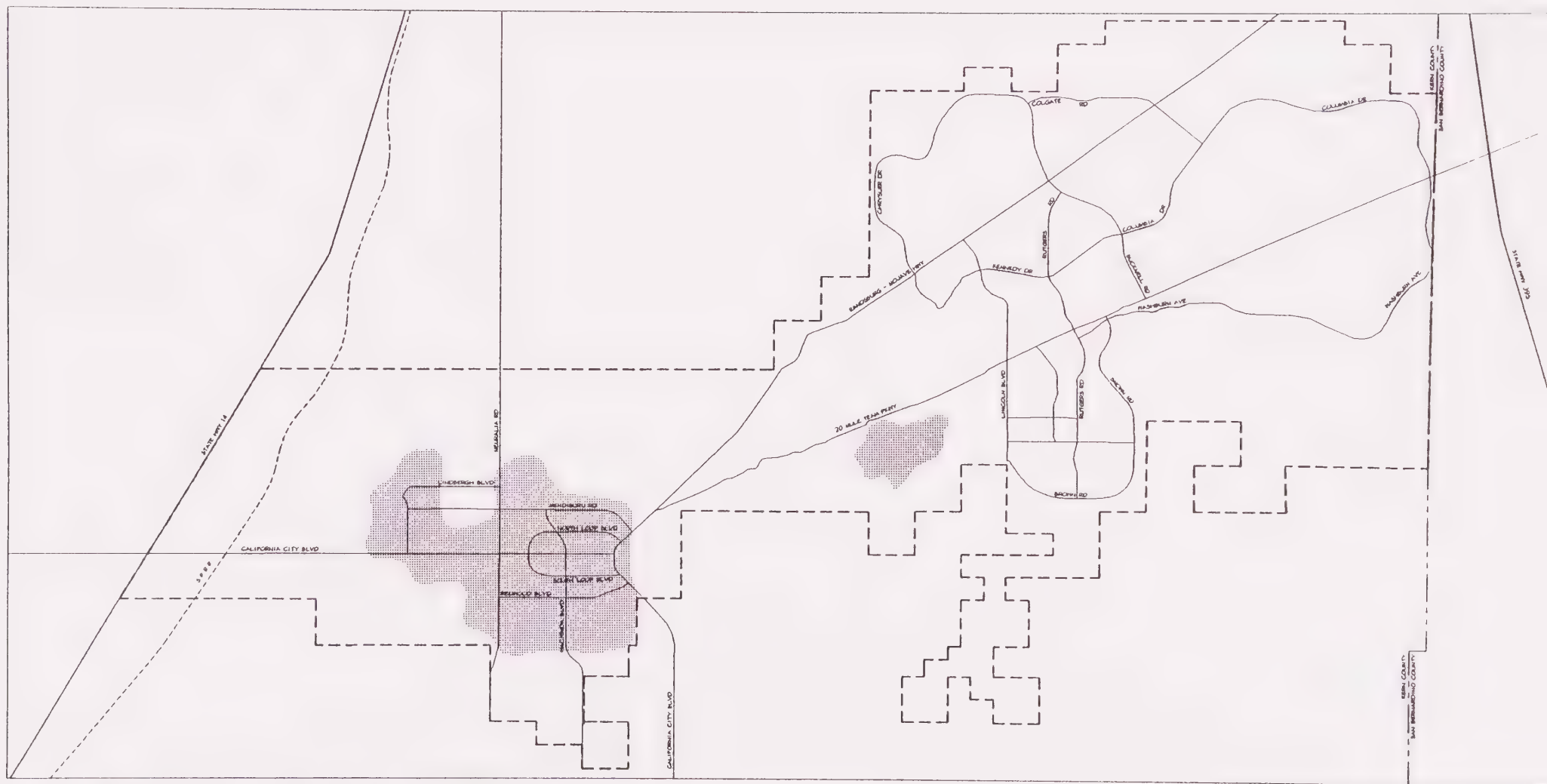
CALIFORNIA CITY
 GENERAL PLAN
 LAND USE MAP 1992-2012

-  PRIMARY URBAN AREAS
-  SECONDARY URBAN AREAS
-  RURAL SERVICE AREAS
-  PLANNED CORE AREAS



**Growth Management
 PRIORITY PHASING PLAN**

FIGURE
 6



CALIFORNIA CITY GENERAL PLAN

LAND USE ELEMENT 1992-2012

 PARCELIZATION DEFICIENCIES



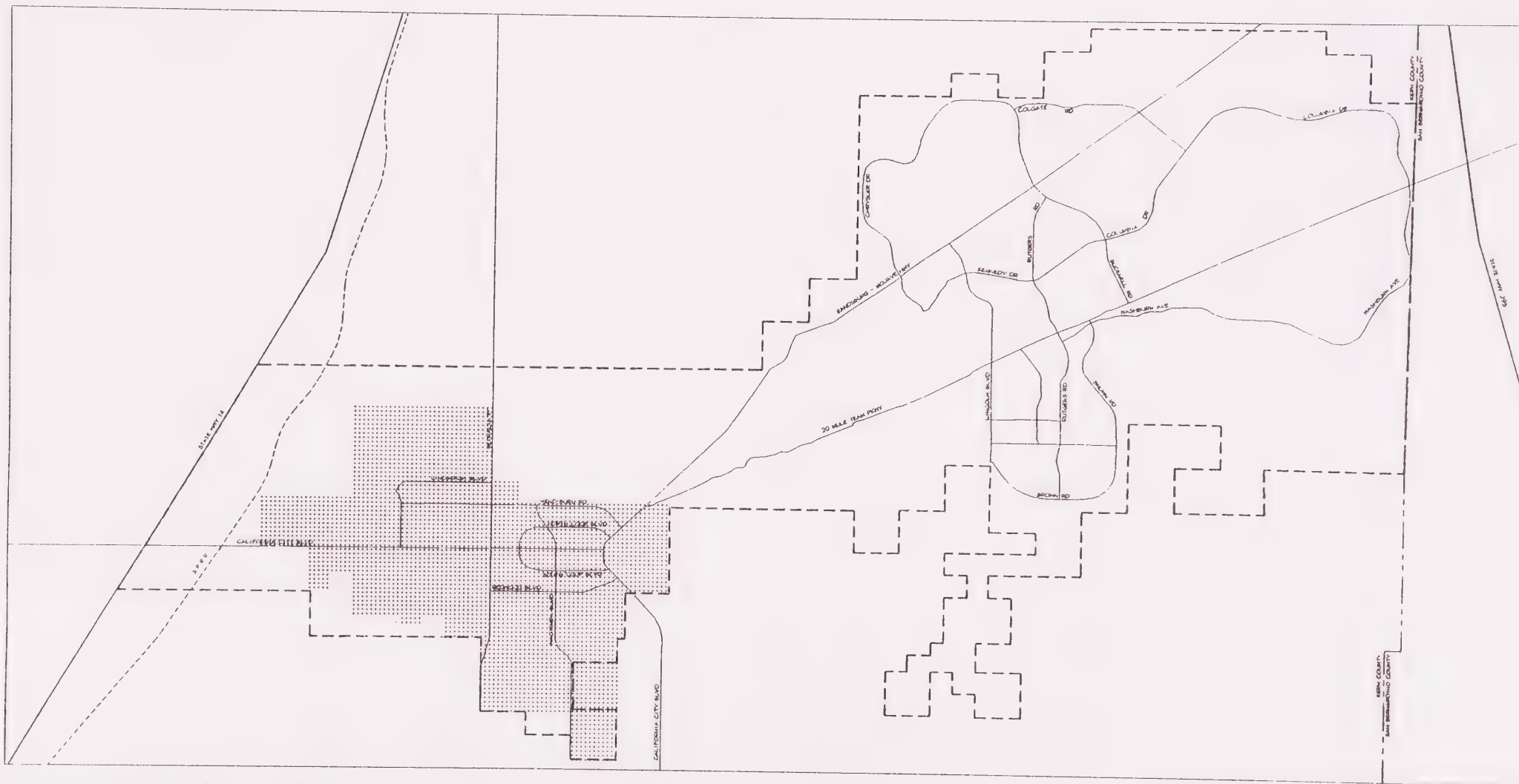
NORTH

0 .5 1 2 3 4 5 MI **QUAD**

**PARCELIZATION
DEFICIENCIES**

FIGURE

7



CALIFORNIA CITY GENERAL PLAN

LAND USE ELEMENT 1992-2012



REDEVELOPMENT PROJECT AREA



NORTH

0 0.5 1 2 3 4 5 MI

QUAD

**REDEVELOPMENT
PROJECT AREA**

FIGURE

8

Urban and rural development should be closely monitored. As the demand for land approaches saturation, the boundaries of the land use designations should be modified accordingly.

A growth management phasing plan has been established as a guideline in reviewing land development proposals and municipal infrastructure extensions. The Phasing Plan includes four categories, as follows:

Primary Urban Area

This area consists of 32 tracts occurring mainly in the built-up area. The Primary Urban Area is currently served by full or partial utilities. This area is further divided into five separate phases based on the extent of utilities available and proximity to existing development.

Secondary Urban Area

This area includes the existing water storage tank and extends from the Primary urban Area on the southwest, along Twenty Mule Team Parkway to Galileo Hill and Tracts 3281, 3282 and 8388 on the northeast. The Secondary Urban Area is divided into three phases. Only limited urban services are recommended until detailed development plans have been prepared and adopted.

Planned Core Areas

These areas have been previously discussed in detail. No further subdivision, building or urban services are recommended until detailed development plans have been prepared and adopted.

Rural Service Area

Includes land designated as Controlled Development and all other land not specifically included under any other phasing category. No urban services are recommended until such time as detailed development plans have been prepared and adopted.

The Phasing Plan relates to sequence rather than specific time frames. The Phasing Plan is a tool to be used when allocating scarce resources and when encouraging development in one area over another. Exceptions will inevitably have to be made in order to respond to any reasonable demand for more serviced land. The intent is to concentrate on quality development and efficient management. Wherever the net result of expansion can be demonstrated to be in the best long-term interests of the City, an exception should be permitted. If inadequate information exists to judge a project, this fact alone should cause a judgment against the project itself. The burden of proof where a proposal is

inconsistent with the General Plan must be on the applicant. However, review and favorable response should be in direct proportion to the quality of the material presented. Whenever innovations are able to produce City-wide benefits, serious and favorable consideration should be given.

203-03.2 Goal

- 203-03.2.1 To facilitate and implement orderly physical development of urban infrastructure.
- 203-03.2.2 Establish urban growth management policies which seek to minimize the costs of municipal infrastructure expansion and maximize the municipal benefits.
- 203-03.2.3 Encourage a concentrated urban land use pattern which provides for the economically efficient provision of urban services to the central core.
- 203-03.2.4 Implement growth management decisions which achieve the following phasing plan benefits:
- Maximum utilization of land in already developed areas.
 - A more cohesive city with more perceivable neighborhood variety and identity.
 - Increased water and energy conservation.
 - Reduced air and water pollution.
 - Maximum use of existing service systems and facilities.

203-03.3 Policies

- 203-03.3.1 The central core (317 property) should be given a high priority for immediate urban development.
- 203-03.3.2 Maintenance, redevelopment and improvement of existing systems should take priority over new development and expansion and extension of facilities to areas outside the central core.
- 203-03.3.3 Development innovations and creativity should be encouraged as a means to orderly growth and expansion.
- 203-03.3.4 The priority phasing plan should be utilized as a means to allocate municipal resources and encourage new physical development.

203-03.3.5

In extending higher density uses into development areas, the following criteria should be considered:

- Contiguity with existing development (in-fill rather than leapfrog development).
- Environmental suitability for urban or rural development.
- Cost/benefit ratio of alternative provisions.
- Open space and Village identify.

CIRCULATION ELEMENT

California City

300 CIRCULATION

301 INTRODUCTION

This Circulation Element satisfies California Government Code Title 7, Section 65302(b) which requires the General Plan to include a circulation element indicating the location and extent of existing and proposed major thoroughfares, transportation routes, terminals and facilities. The Element is intended to function as a comprehensive transportation plan covering not only streets and highways, but also bikeways, public transportation, railway and airport systems, and truck routes.

302 STREET AND HIGHWAY CIRCULATION SYSTEM

302-01 Introduction

The Street and Highway Transportation Plan, consisting of text and the accompanying Plan map, indicates the major streets and highways within the Planning Area. In addition, it establishes policies intended to insure optimum efficiency and safety in the movement of people and goods within and beyond the Planning Area.

The City's system of streets and highways is based on a functional classification system providing four levels of service: major arterials, arterials, collectors, and local roads.

The planned function of a street may not be reflected in its current design. Adopted street standards illustrate the typical right-of-way design for major arterials, arterials, collectors, and local streets. The policies in the Plan provide, however, that the City may deviate from these standards where conditions warrant special treatment of the roadway.

Circulation within California City is comprised of the following major streets:

California City Boulevard is a major transportation route. It is designated as a major arterial, and is currently a four lane road with median in the vicinity of the project site. It provides access from State Route 14 and Interstate 58 to California City. To the west of the first community, California City Boulevard becomes a two lane road at Baron Boulevard and continues as a two lane road to the intersection with Highway 14. California City Boulevard is controlled with a stop sign at this location. To the south, California City Boulevard becomes a two lane boulevard to the south of Redwood Boulevard, and remains a two lane road to the intersection of Highway 58. California City Boulevard is controlled with a stop sign at its intersection with Highway 58.

Yerba Boulevard is designated as a north-south primary street and is currently a two lane road. It provides access to California City Boulevard for property both on the north and south side of California City Boulevard. The intersection of Yerba Boulevard and California City Boulevard is controlled with stop signs for Yerba Boulevard traffic.

Neuralia Road is designated as a north-south arterial. It currently is a four lane road north and south of California City Boulevard. Neuralia Road provides access from residential areas north and south of California City Boulevard. The intersection of Neuralia Road and California City Boulevard is unsignalized, with stop signs for all four legs. Redwood Boulevard stops at Neuralia Road. Redwood Boulevard does not extend west of Neuralia Road at this time.

North Loop Boulevard is classified as a primary street and is currently developed to two lanes in width north of California City Boulevard. North Loop terminates at California City Boulevard-Randsburg Mojave Road. The intersection of North Loop and California City Boulevard is controlled with stop signs at all four legs. The intersection of North Loop Boulevard and Hacienda Boulevard is controlled with stop signs on Hacienda Boulevard.

Hacienda Boulevard is a north-south street that is designated as a major arterial. Presently Hacienda Boulevard is a two lane street in the project vicinity, and terminates at North Loop Boulevard on the north and Redwood Boulevard on the south. The intersection of Hacienda Boulevard and California City Boulevard is controlled with stop signs for Hacienda Boulevard. Hacienda Boulevard has split access at California City Boulevard with the west half of the two way street accessing traffic to the north, and the east portion acting as a driveway for the City Hall and governmental buildings.

South Loop Boulevard is designated as a major arterial in this area and is paved as a wide two lane road. The intersection of South Loop Boulevard and California City Boulevard is controlled with a four-way stop.

The intersection of South Loop Boulevard and Hacienda Boulevard is controlled with stops for Hacienda Boulevard. The intersection of South Loop Boulevard and California City Boulevard (east end) is a three-way intersection with stop signs for South Loop Boulevard.

Redwood Boulevard is a wide two lane road in the project area that extends from Neuralia Road on the west to California City Boulevard on the east. Redwood Boulevard is controlled with stop signs at Neuralia Road and at California City Boulevard. At the intersection of Redwood Boulevard and Hacienda Boulevard, Hacienda Boulevard is controlled with stop signs.

Randsburg-Mojave Road is a two lane major highway that serves the area northeast of California City. The street becomes a four lane road at Voltaire Court and remains a four lane road to the intersection of California City Boulevard.

302-02 Goal

302-03 Objectives

302-03.1 Plan and provide a street and highway system to move people and goods in an orderly, safe, and efficient manner. Not to exceed Level of Service "C".

302-03.2 Plan and develop a street and highway system so as to maximize its effectiveness while minimizing its cost.

302-03.3 Minimize the adverse impact of streets and highways on adjacent land uses and on the environment of the Planning Area.

302-03.4 Provide a street and highway system which can accommodate alternative modes of travel.

302-03.5 Provide a street and highway system which is aesthetically pleasant to the user through the incorporation of landscape buffering on applicable medians and rights of way.

302-04 Policies

302-04.1 Major arterials provide for through traffic movement on continuous routes with direct access to abutting property.

302-04.2 Arterials provide for through traffic movement on continuous routes, joining major traffic generators, major arterials, and other arterials. Access to abutting property should be controlled.

302-04.3 Collectors provide internal traffic movement within an area and connect local roads to the arterial system. Access to abutting property is generally permitted.

302-04.4 Local streets provide internal traffic movement within an area and primarily serve to provide direct access to abutting property.

302-04.5 The City may deviate from the Typical Roadway Cross Section standards in circumstances where unique conditions warrant special treatment of the roadway.

302-04.6 Access to property abutting an arterial or collector roadway should be subject to the following criteria:

- 302-04.6.1 Direct access from an arterial or collector to a major traffic generator should be restricted through design requirements on new developments which provide for frontage roads, access to other roads, or limits on the number and location of direct access points. Major traffic generators may be defined as including, but not being limited to, large multiple-family residential developments, large commercial developments, industrial developments, educational institutions and medical centers.
- 302-04.6.2 New residential subdivisions should be designed with a minimum number of lots fronting directly on collector streets and with no lots fronting directly on arterial streets. Vehicular access may be permitted from a frontage road or from other roads. Where direct access is provided from a residential subdivision lot to a collector street, turnaround facilities should be required for each such lot as a condition of subdivision approval so that vehicles do not back out onto the roadway.
- 302-04.7 The City should provide a planned system of streets and highways which provides for the orderly, safe, and efficient movement of people and goods by the following:
- 302-04.7.1 Continue to maintain the City of California City Circulation Element street and highway classifications.
- 302-04.7.3 When and where necessary, prepare and adopt Precise Plans of streets and highways to establish and protect rights-of-way for the future development of planned arterial and collector streets, as determined by the Ultimate Rights-of-Way Plan.
- 302-04.8 The City should insure completion of planned arterial and collector streets as they become necessary to serve developing urban areas or to meet developing traffic demands of the City by the following:
- 302-04.8.1 Adopt a street improvement program based on a needs priority system.
- 302-04.8.2 Coordinate the street improvement program with other public service facility improvement programs.
- 302-04.8.3 Require dedication and improvement of necessary street facilities as a condition of land development.
- 302-04.8.4 Utilize available State and Federal funds for street and highway development.

- 302-04.9 The City should insure that planned streets and highways operate to their maximum efficiency by coordinating their multi-modal use as follows:
- 302-04.9.1 Develop bikeways in accordance with the City Bikeways Plan.
- 302-04.9.2 Consider the need for transit and bikeway facilities when establishing the ultimate rights-of-way of streets and highways. The City should prepare typical roadway cross sections which define standards for transit and bikeway facility improvements.
- 302-04.9.3 Provide additional rights-of-way and improvements off of the travelway of arterial and collector streets where deemed necessary for public transportation.
- 302-04.9.4 Provide areas for pedestrian travel which enhance the safety and efficiency of the street system.
- 302-04.10 The City should minimize the adverse impact of truck traffic on the community by maintaining and enforcing a system of designated truck routes.
- 302-04.11 The City should insure the installation of signals, signs, lighting, and other traffic improvements necessary for the safe and efficient movement of vehicular traffic and pedestrians within the City by the following:
- 302-04.11.1 Adopt and maintain a traffic safety and operations improvement program based on a needs priority system as part of the City street improvement program.
- 302-04.11.2 Require the installation of necessary street improvements as a condition of land development.
- 302-04.12 The City should minimize the adverse environmental impact of street and highway development by utilizing road construction methods which reduce the air, water, and noise pollution associated with such development.
- 302-04.13 The City should encourage interior street designs within new subdivisions which promote the safety and integrity of neighborhoods.
- 302-05 Street and Highway System

The following major arterial, arterial, and collector streets and highways are indicated on the Circulation Map:

302-05.1 Major Arterials

California City Boulevard
Neuralia Road
Twenty Mule Team Parkway
Randsburg-Mojave Road
Lincoln Boulevard

302-05.2 Arterials

Mendiburn Road
Redwood Boulevard
Hacienda Boulevard
Sequoia Boulevard
Brown Road
Chrysler Drive
Kennedy Drive
Rutgers Road
Washburn Avenue
Columbia Drive
Colgate Road

302-05.3 Collectors

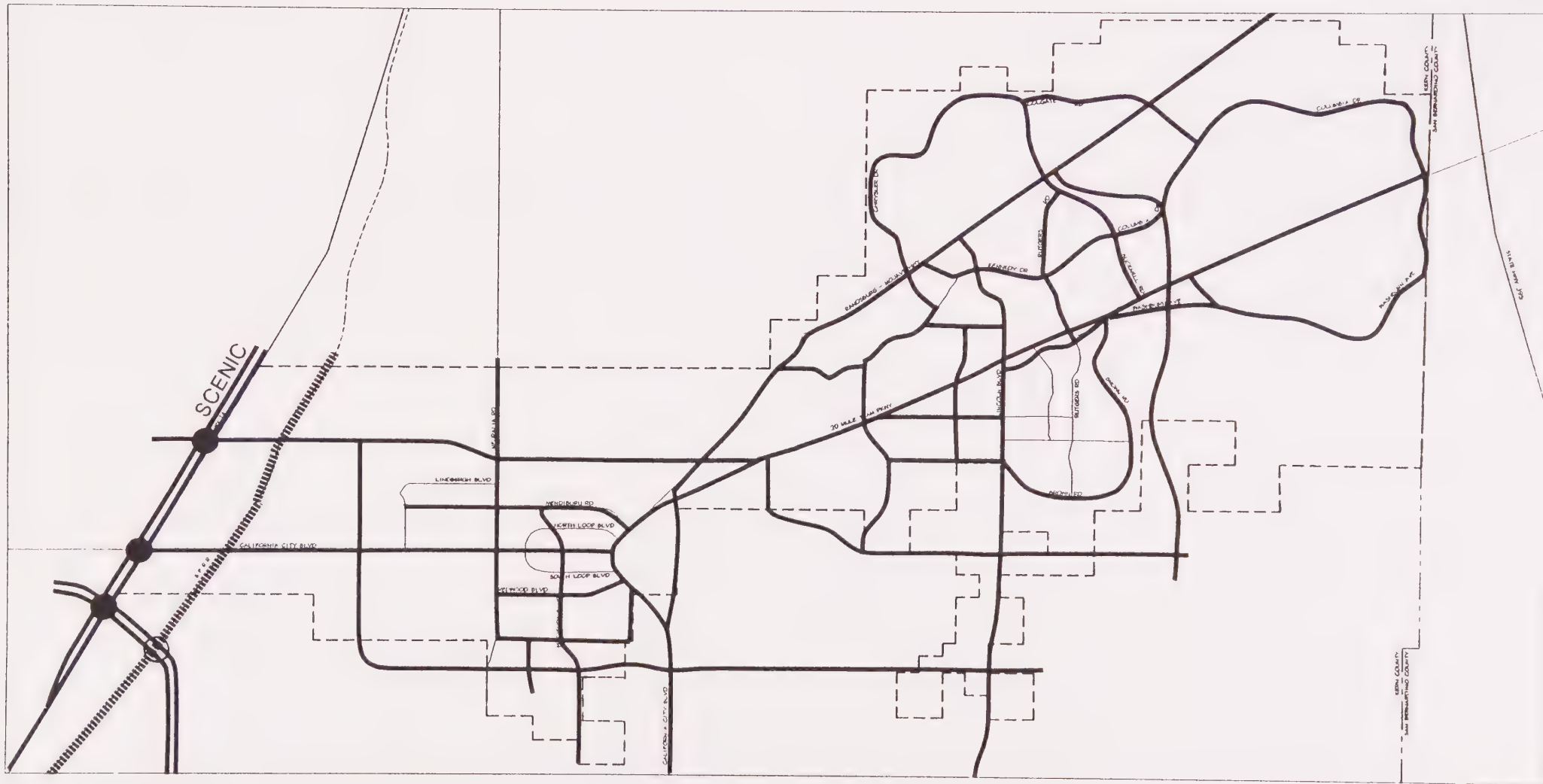
Lindbergh Boulevard
North Loop Boulevard
South Loop Boulevard

302-05.4 Local Streets




All other roads within the California City Planning Area are local streets. Their alignments are to be determined on the basis of the land use to be served and the location of the major arterial, arterial, and collector streets and highways.



302-06 Analysis of Street and Highway System

The street and highway system previously described is based on an evaluation of: the existing and planned land use patterns, the existing and potential future traffic volumes, the existing County circulation plans and the previous City circulation plan, and the information developed as a result of citizen participation workshops. In addition, this Circulation Plan seeks to provide for the maximum feasible integration between the planned City and County street and highway systems to accommodate circulation needs to the year 2012.



CALIFORNIA CITY
GENERAL PLAN
1992-2012

-  FREEWAY/EXPRESSWAY
-  ARTERIAL/MAJOR HIGHWAY (2-4 LANES)
-  RAILROAD

-  GRADE SEPARATION
-  INTERCHANGE

STREET CIRCULATION MAP



The adopted 1974 California City General Plan includes a scenic highways element which identified Twenty Mule Team Road as a scenic highway route. The scenic highways element was a State of California mandated general plan element but is no longer a requirement for adoption. The Scenic Highway Element therefore is not a part of this 2012 General Plan Update. A scenic route along Highway 14, however, was designated by the Kern County Board of Supervisors and contained in the 1992 Kern County Circulation Element.

Kern County has yet to begin using any of the policies, standards, or implementation called for in the Scenic Highways Element. The chief program called for in the Scenic Highways Element is to prepare and adopt "Scenic Corridor" specific plans next to all State and County-designated eligible scenic highway rights-of-way. The corridors would include all natural and man-made features visible from the roadway.

A *Scenic Corridor Overlay Zone* district must be adopted by ordinance for protection and enhancement of scenic qualities of the County's roadside. The proposed zone overlay district includes environmental considerations. These include special sign limitations, permitted uses, building design, landscaping, grading, setbacks, tree removal, screening, and above-ground utilities. The Scenic Highways Corridor Overlay Zone has yet to be adopted. Kern County has not adopted any scenic corridor specific plans.

Caltrans has the responsibility for coordinating Scenic Highway programs. Caltrans will not act on programs until the local government requests aid from that agency. Caltrans will coordinate and conduct two studies. Caltrans calls the studies "Corridor Survey" and "Highway Facility Study". Results of these two studies will be presented in a comprehensive Scenic Highway Report. The report will contain maps, photographs, and other documentation.

303 BIKEWAYS TRANSPORTATION SYSTEM

303-01 Introduction

The California City Bikeways Plan is a subsection of the California City General Plan Circulation Element and serves as one of the several transportation modes which comprises the Circulation Element.

A "bikeway" is a general term for any type of facility that explicitly provides for bicycle travel. The bikeway can be anything from an independent, grade-separated facility on a separate right-of-way to just a signed route along a city street. In this Plan there are three classifications of bikeways (bike paths, bike lanes, and bike routes) based on the degree of exclusivity with which the facility is preserved for bicycle use. The two main purposes of bikeways are to guide bicyclists to their destinations and to provide some

measure of protection or safety. The types of bikeways included in a bikeway system will determine the measure of safety.

303-02 Goal

303-03 Objectives

303-03.1 Develop a continuous and easily accessible bikeways system which facilitates the use of the bicycle as a viable alternative transportation mode.

303-03.2 Develop programs, standards, ordinances, and procedures to achieve and maintain safe conditions for bicycle use.

303-03.3 Encourage bicycling for reasons of ecology, health, economy, and enjoyment as well as for transportation use.

303-03.4 Encourage the use of the bicycle within the total transportation network.

303-04 Policies

303-04.1 Development of a bikeways system for the California City Planning Area shall be guided by the following:

303-04.1.1 Priority should be given to bikeways that will serve the most cyclists and destinations of greatest demand.

303-04.1.2 Bikeways should be designated near major traffic generators such as commercial and employment centers, schools, recreational areas, and major public facilities.

303-04.1.3 Bicycle parking and storage facilities should be provided at major bicycle traffic generators.

303-04.1.4 Bikeways should be provided in both existing and future parks where they will not cause serious conflicts with other uses of the parks.

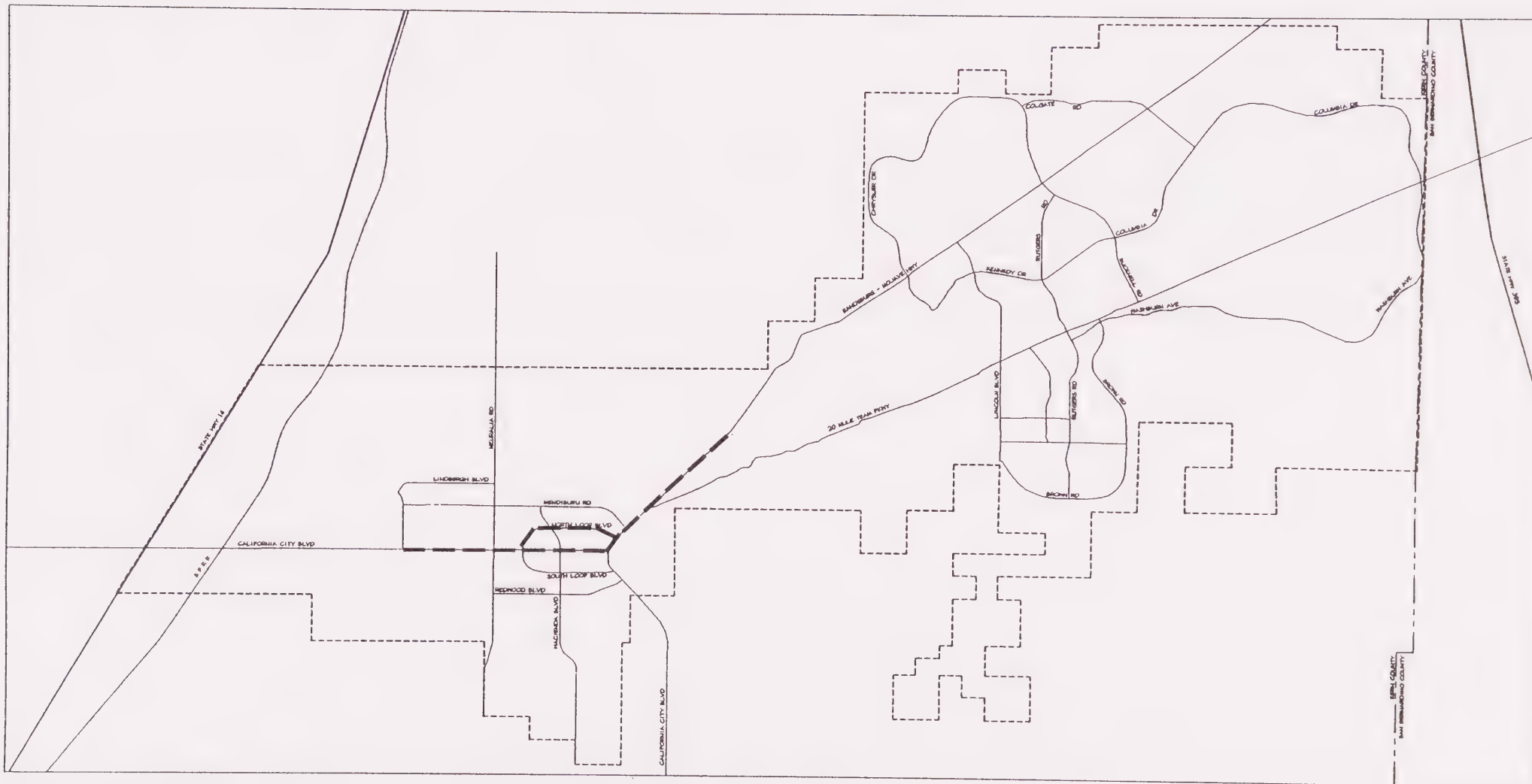
303-04.1.5 Bikeways should be continuous and should be linked to other bikeways and recreation facilities.

303-04.1.6 Whenever possible, bikeways should be developed in conjunction with street construction and improvement projects occurring along streets and roads where bikeways have been designated on the Bikeways Plan map.


303-04.1.7 The design and construction of bikeways shall conform to the standards

established by the California Department of Transportation.

- 303-04.2 Safe conditions for bicycle use shall be developed and maintained. The following shall apply:
- 303-04.2.1 A visually clear, simple, and consistent bikeway system with clearly defined areas and boundaries should be established.
 - 303-04.2.2 For the safety of those who use the bikeways, the City should consider stopping a bikeway before a major street intersection or dangerous railroad crossing and starting it again after the area has been passed. Within these potentially dangerous areas, bicyclists walk their bicycles or ride with extra caution at their own risk.
 - 303-04.2.3 Through mass media, school, and private efforts, the City of California City should encourage a program of education in the rules of the road, aimed at both the cyclist and the motorist.
 - 303-04.2.4 Bikeways should be constructed and maintained to reduce or eliminate hazards such as unsafe drainage grates, dirt, glass, gravel, and other debris.
 - 303-04.2.5 The bikeway system should be monitored and evaluated in order to determine the effectiveness of established bikeway facilities in terms of use, safety, and efficiency.

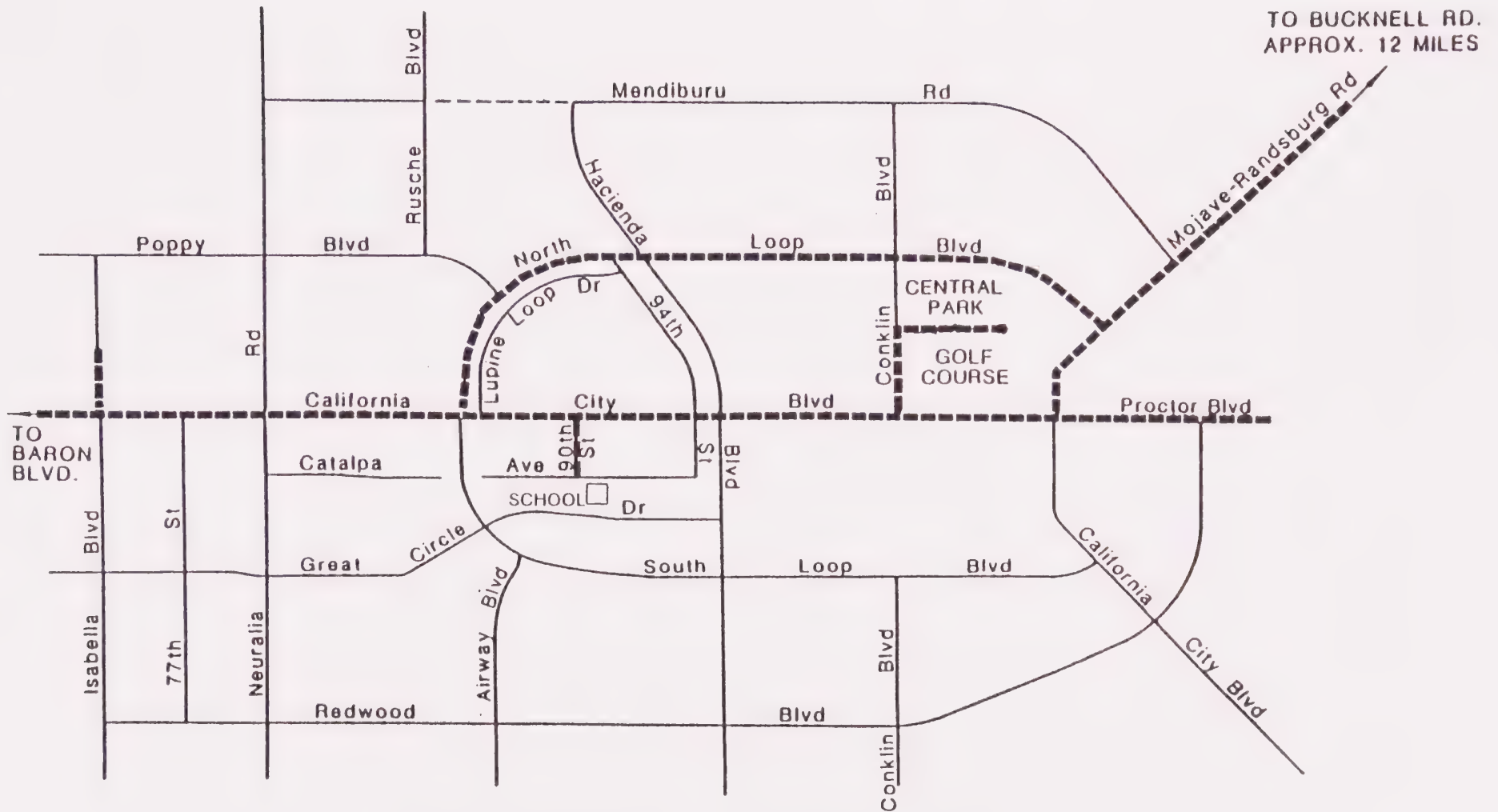


CALIFORNIA CITY
GENERAL PLAN
 CIRCULATION ELEMENT 1992-2012

 PRIMARY BICYCLE ROUTE



GENERALIZED
PRIMARY BICYCLE ROUTE
 (SEE INSERT FOR DETAIL)



CALIFORNIA CITY
GENERAL PLAN
CIRCULATION ELEMENT 1992-2012

 PRIMARY BICYCLE ROUTE



0 .5 1 2 3 4 5 MI 

INSERT

PRIMARY BICYCLE ROUTE

FIGURE

11

303-05 Bikeway System

303-05.1 The planned bikeway routes are designated on Figure 11.

303-06 Analysis of the Bikeway System

The bikeway system is designed to serve all major community traffic generators including commercial areas, schools, recreational facilities and major public facilities. However, the majority of bicycle users in California City are operated by elementary school children. A principal emphasis of the Plan is to cater to this juvenile cycling population by linking residential areas to schools and recreational facilities.

304 PUBLIC TRANSPORTATION SYSTEM

California City is located in a triangle of regional arteries: State Highway 14 to the west, turning northeast from the City of Mojave toward Red Rock Canyon and northerly to Inyokern; U.S. Highway 395, located to the east of California City and oriented northwest through Randsburg, Johannesburg, and Red Mountain, connecting with State Highway 14 northwest of Inyokern; and State Highway 58 (Interstate 40), which runs east-west from the City of Mojave through North Edwards and Boron along the northern boundary of Edwards Air Force Base to Barstow and beyond. California City Boulevard intersects State Highway 14 approximately five miles north of Mojave and serves as the western entrance to the community. The Twenty Mule Team Road, which interconnects the "First" and "Second" Communities, extends eastward to intersect U.S. Highway 395. However, the easternmost nine miles is graveled, not paved.

The local circulation system for California City is extensive, designed by the original developers to serve a large urban population. About half of the nearly 600 miles of roads are paved, the rest graded, and all but the thirty miles of roadway serving the developed western portion of the City is in need of repair. California City Boulevard comprises the main east-west street entering the community from State Highway 14 on the west, serving the Civic Center area, and turning south to join State Highway 58 on the south. The Twenty Mule Team Road extends twenty miles northeast from California City Boulevard and connecting with U.S. Highway 395. Dial-A-Ride is the only service within the City, and the City has arranged for daily bus service to Lancaster beginning in July, 1992, to provide for the medical care and shopping needs of residents. The Dial-A-Ride service operates strictly within the "First Community" and is sponsored by the City with State of California funding. In existence for about nine years, it has three units, all of which are equipped to handle wheelchairs.

In August 1992, Kern County Transit began operation of the "East Kern Route", which provides intercity transit service between California City, Mojave, Rosamond, Lancaster and Palmdale. Service is initially being provided three days per week on Monday, Wednesday and Friday (major holidays excluded), with three round trips each of those days. Service may be expanded to five or six days per week depending on public interest and ridership. Boardings and debarkings are made at scheduled locations along the route, and is being coordinated with local

community dial-a-rides as well as Antelope Valley Transit in Lancaster and Palmdale. One-way fares for the general public vary between \$1.00 and \$3.50, depending on the length of the trip. Fifty percent discounted fares are available for seniors sixty-two and over, disabled individuals, and youths up to fifteen years.

305 RAIL TRANSPORTATION SYSTEM

California City is served by one line of the Southern Pacific Railroad located along the western portion of the community. At present, there is no railroad terminal or facility serving California City.

306 AIR TRANSPORTATION SYSTEM

California City Municipal Airport is located four miles northwest of the Civic Center and serves general aviation. The airport has a 6,000-foot illuminated runway, and airplane hangars. Manufacturing and aviation-related businesses are located nearby.

**OPEN SPACE
AND CONSERVATION ELEMENT**

California City

500 OPEN SPACE AND CONSERVATION ELEMENTS

501 INTRODUCTION

Open Space is an irreplaceable resource and one of the most valuable assets of the California City area. It is irreplaceable because once it has been committed to urban development, it will not be recoverable as open space. The State of California, recognizing this potential for loss, requires the City of California City to prepare and adopt both an open space element and a conservation element of the general plan [Government Code Section 65302(d) and (e)]. Since the concerns of the Conservation Element relate directly to, and overlap many of the concerns of the Open Space Element, these two elements have been prepared as a combined element.

Open space generally refers to any water or land which has value for single or multiple open space functions. Specifically, there are five different functional types of open space. These include open space for (1) the preservation of natural resources, including rivers; (2) the managed production of agricultural and other resources; (3) public health and safety -- including flood plains and unstable soil areas which require special management or regulation; (4) controlling urban form and preventing inefficient patterns of development; and (5) outdoor recreation -- including parks and areas of historic and cultural value. As used in this Element, open space refers to land usable by the public for passive or active recreational purposes.

The Conservation Element provides for the conservation, development and utilization of natural resources including water, soils, rivers, wildlife and other natural resources. The Conservation Element overlaps provisions found in the Open Space, Land Use, Safety and Circulation Elements. It differs, however, from other portions of the General Plan in that it is almost exclusively oriented toward natural resources.

501.1 Water Supply: At least two studies of California City's domestic water supply have been completed in the past twenty years, the most comprehensive being the one prepared by Krieger and Stewart in 1972. A more recent analysis which did not include any field testing, and is primarily a review of existing data, was completed by Saint-Amand Scientific Services in November, 1991.

All but a few hundred acre-feet of water utilized by California City's population annually is pumped from the underground aquifer. The balance is surface water purchased from the Antelope Valley-Eastern Kern Water Agency (AVEK).

Groundwater Units. The U.S. Geological Survey has delineated the groundwater units in the area of California City (see Figure 5-1). Those that impact the community's groundwater supply are as follows; Chaffee Subunit, California City Subunit (zones 1 and 2), Koehn Subunit, Peerless Subunit and the Rand-Boron Subunit. California City pumps its water entirely from zone 2 of the California City Subunit.

Groundwater units and subunits have commonality of recharge or storage, and in the area of California City, their boundaries are often determined by topographic features and fault lines which run in various directions throughout the area.

The Chaffee Subunit is located in the west of the community and contains several million acre feet of high quality water. It is recharged primarily by water flowing under Cache Creek and Sand Creek, which drain a large area of the Tehachapi Mountains that is subject to relatively high annual precipitation levels. Although only rarely do the two drainages bring surface water onto the desert floor, there are significant under-surface flows that contribute to the subunit's recharge.

The Muroc Fault divides the Chaffee Subunit from the California City Subunit, and provides a barrier for sub-surface water to move from west to east, even though the water table southwest of the Muroc Fault is higher than that to the east of the fault line. Thus, there is no opportunity for water from the Chaffee Subunit to fill the depression that has been created by past agricultural pumping activities as well as domestic water pumpage in the California City Subunit.

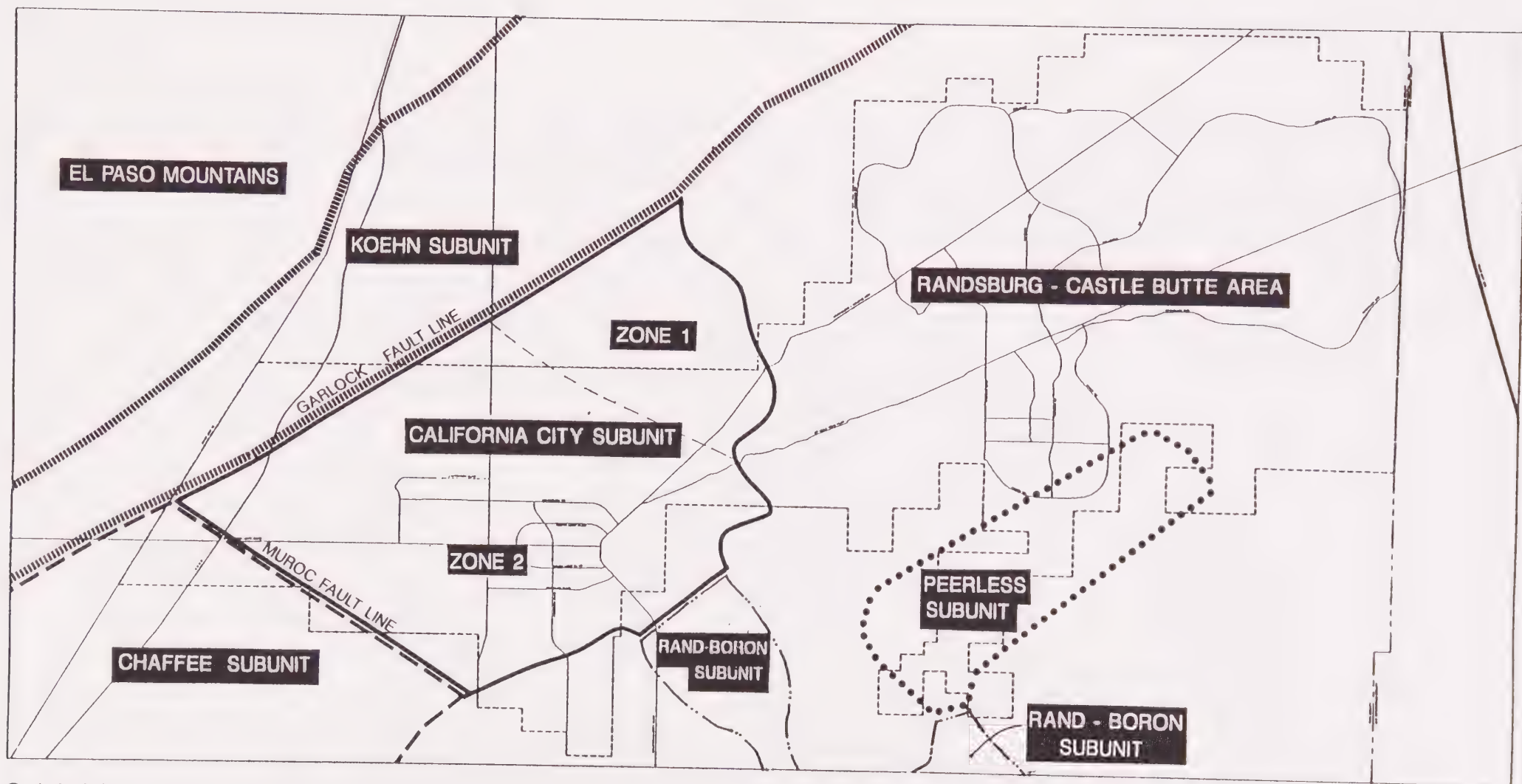
The effect of the Koehn Subunit to the north has a negative effect on the California City Subunit in that groundwater migrates in that direction toward Koehn Dry Lake, the surface collection point in earlier times for water draining from the Tehachapi Mountains, Red Rock and Jawbone Canyons, the El Paso Mountains and Rand Hills. Groundwater contours reveal this natural movement in the direction of Koehn Dry Lake, a movement which is enhanced by the depression in that subunit caused by long-time pumping from the irrigation of alfalfa.

The Peerless Subunit occupies Peerless Valley (see Figure 5-1) and receives little or no recharge to the estimated 250,000 acre feet of water that accumulated during the Ice Age. Water pumped from this aquifer is truly being mined and is of marginal quality.

Similarly, the Rand-Boron Subunit has no recharge from the surrounding hills, and although a portion of the Subunit is located within the boundaries of California City, it has little potential to provide a sustained water supply for anything more than a small population.

501.2

Water Utilization: At the time the land sale promotion activities began in 1958, an estimated 70-foot depression had occurred under the area that is now the center of the community as a result of agricultural pumping for the irrigation of alfalfa. Upon the cessation of this pumping, the depression began to fill in, and in 1961 about 50 feet of the depression had recovered, leaving a 20-foot depression in and around the developed community. By 1990, however, the depression had returned to about 50 feet as a result of pumping for domestic water.



CALIFORNIA CITY
GENERAL PLAN
OPEN SPACE / CONSERVATION ELEMENTS 1992-2012



GROUNDWATER UNITS AND SUBUNITS

FIGURE
12

The Kreiger and Stewart study concluded that the recoverable water in Zone 2 of the California City Subunit is about 2.1 million acre-feet. The recent Saint-Amand study (1991) concurs with that estimate.

Present water usage levels related directly to California City are estimated to be 2,100 acre-feet annually for strictly domestic purposes, and another 1,000 acre-feet for irrigation of the golf course, park area and for lake replenishment. The latter usage alone accounts for about 160 acre-feet annually, there being approximately 16 acres of lake surface and an annual evaporation rate exceeding 120 inches.

Given the California Department of Finance estimate of 7,925 persons living in the community in 1992, domestic water usage (exclusive of golf course and park irrigation as well as lake replenishment) averages approximately 235 gallons per person per day. This is nearly double the figure utilized by planners (125 gallons per person daily) throughout California in designing community water systems. Much of this increased usage can likely be attributed to the cultural tendency of people to maintain lush lawns, shrubbery and trees in this very arid environment.

According to the Saint-Amand Study, an analysis of active well data revealed that the static water level in all wells drilled in the 1950's has dropped about 25 feet, with the exception of Well #11 which has dropped 85 feet. The production wells have an average of 326 feet of standing water, thus if pumping continues at present rates, the wells will continue to produce for several more decades.

In addition to water utilization for domestic purposes, the Saint-Amand Study concludes that approximately 10,000 acre-feet of groundwater is translocating annually to the Koehn Subunit from the Chaffee Subunit and Zone 1 of the California City Subunit. This is the result of the depression that exists in the Koehn Subunit from long-term agricultural pumping, which still continues. Obviously, this is water that can not be captured by California City.

As this document is being prepared, a 16,000-acre annexation to California City is before the Local Area Formation Commission (LAFCO). This annexation would encompass an area between the present western boundary of the City and Highway 14. According to the City Engineer, this area would eventually require the drilling of a new well to serve the residents within the annexed area and this new segment would also intertie with the City's existing system.

As previously mentioned, the City purchases approximately 300-400 acre-feet of surface water from AVEK each year. The conveyance system can accommodate

the delivery of as much as 2,000 acre-feet annually, however the amount of surface water that is available varies year-to-year depending upon precipitation levels in northern California where the majority of the water is captured and stored in manmade reservoirs.

501.3 **Water Quality:** The groundwater utilized by California City is not treated. It is high in total dissolved solids (450-660 parts per million) and in fluoride content (1.0-1.8 ppm). According to the Saint-Amand study, however, the groundwater quality is higher than that of the surface water purchased from AVEK because of a high content of halomethanes produced by decaying organic matter (principally algae), and thus it must be blended with the City's groundwater to reduce the concentration of halomethanes to permitted levels.

501.4 **Vegetation:** The native flora of the region is dominated by the creosote bush association which occurs throughout the Mojave Desert at elevations ranging from 2,300 to about 4,500 feet above sea level. Creosote bush (*Larrea divaricata*) generally has an understory of hop sage (*Grayia spinosa*), bladder sage (*Franseria dumosa*) or black brush (*Coleogyne ramosissima*), with an interspersed of various perennial bunch grasses such as desert needle grass (*Aristida californica*) and annual grasses, including cheat grass (*Bromus tectorum*). During the spring months few to numerous species of annual forbs will be present in the understory, the variety being entirely dependent upon the amount of precipitation received during the November-March/April period. During wet years, a virtual carpet of wildflowers will exist for a period lasting from a few days to several weeks, again depending upon the frequency and amounts of rainfall which occur during the spring season. In dry years, there is little or no evidence of these annual plants, because the seeds lack adequate moisture for germination. Common forbs that are present throughout the region include popcorn flower (*Plagiobothrys arizonicus*), Mojave aster (*Aster abatus*) and poor shepard's purse (*Capsella bursa-pastoris*).

It should be mentioned that the Joshua Tree (*Yucca brevifolia*) can be found in very scattered locations throughout the area of California City but would not be considered a primary species.

An examination of the State of California's Natural Diversity database revealed that no threatened or endangered plant species are located within the confines or the nearby vicinity of California City.

501.5 **Wildlife:** Wildlife species which inhabit the Mojave Desert and the area in and around California City are associated with those found in the lower Sonoran Life Zone, a zone characterized by rolling desert plains, dry sinks, low levels of precipitation and sparse, drought-resistant vegetation. Species that are representative of this zone, most of which can be found within the area of

California City, include the coyote (*Canis latrans*), a black-tailed hare (*Lepus californicus*), roadrunner (*Geococcyx californianus*), white-tailed antelope ground squirrel (*Ammospermophilus leucurus*), Mohave ground squirrel (*Citellus mohavensis*) - a species listed as Threatened by the California Department of Fish and Game and as a candidate species (Category 2) by the U.S. Fish and Wildlife Service, desert tortoise (*Gopherus agassizi*) - listed as Endangered by the U.S.F. & W.S. and Threatened by the C.D.F.&G.; sidewinder (*Crotalus cerastes*), desert whiptail lizard (*Cnemidophorus tessellatus*), mourning dove (*Zenaidura macroura*), Gambel's quail (*Lophortyx gambeli*), burrowing owl (*Speotyto cunicularia hypugcea*), turkey vulture (*Cathartes aura*), as well as numerous birds of prey, songbirds and varieties of rodents.

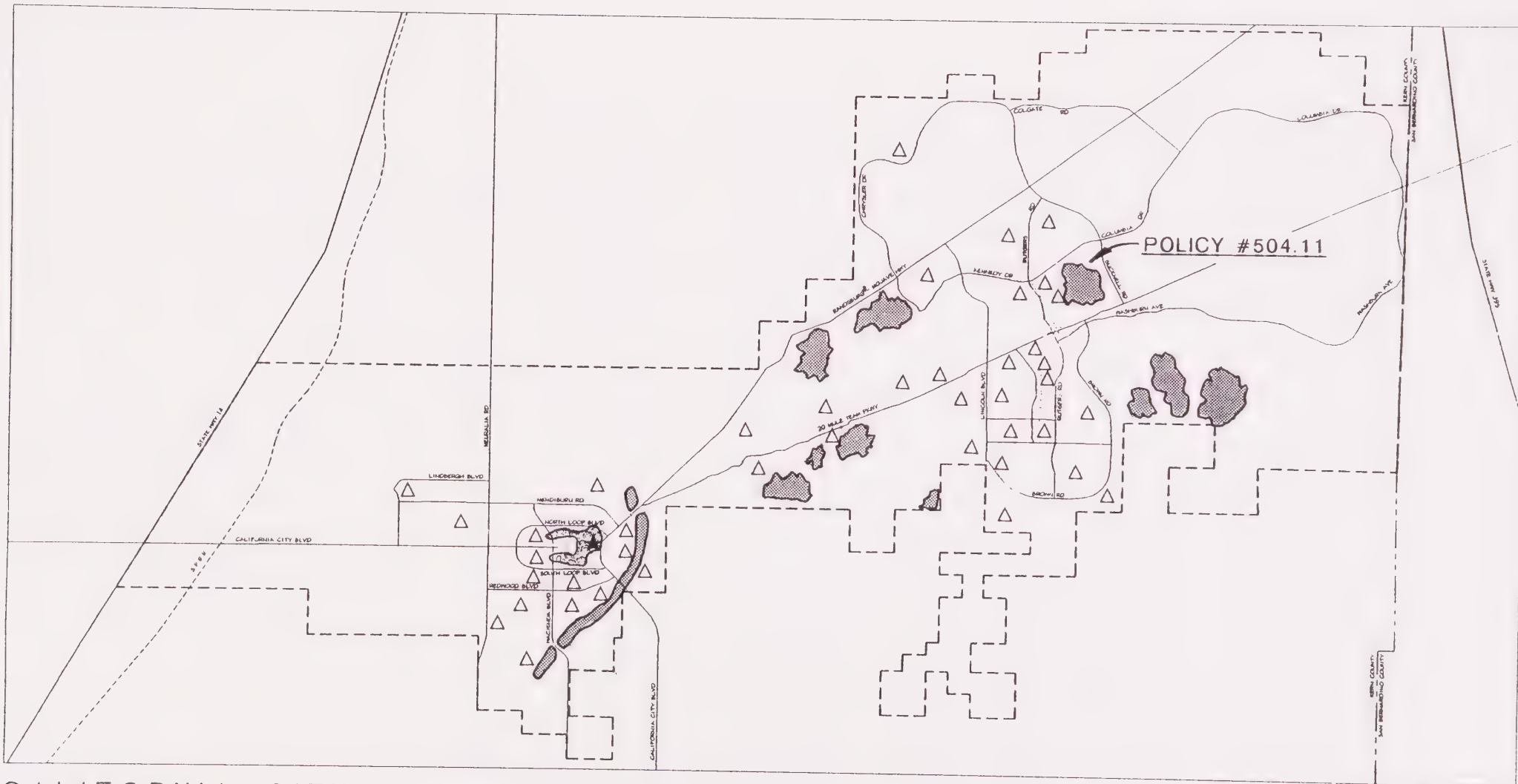
Important to note are the two wildlife species that are listed above which have been given a special status by both the U.S.F.&W.S. and the C.D.F.&G. a specific description of each species, the habitat in which each is found and other pertinent comments immediately follows:

- Desert tortoise - A resident of washes, sand and gravelly flats, canyon bottoms, rocky hillsides and even areas of fire, wind-blown sand, it is in the creosote bush vegetative association that the tortoise is most often found. It needs firm soil for the construction of its burrows, and often shares these dens with other desert reptiles such as the sidewinder, spotted night snake (*Hypsiglena torquata*) and banded geckos (*Coleonyx variegatus*). The species is seriously threatened by the collecting activities of humans, on and off-road vehicle mortality, raven predation, respiratory disease, habitat disturbance and desert community development. A Desert Tortoise Natural Area has been designated by the U.S. Bureau of Land Management. This 25,000-acre area is generally closed to vehicular traffic, livestock grazing, and numerous human activities, and is located adjacent to the city limits of California City in the northeastern sector (see Figure 6-1).
- Mohave ground squirrel - A small ground-dwelling squirrel, its pelage color is pinkish cinnamon without stripes or flecking. Its body and tail underparts are cream-colored and its cheeks are brownish. Found on the sandy desert floor throughout the Lower Sonoran Life Zone, its diet consists mainly of shrub leaves, with hopsage being the most important component. The Mohave ground squirrel coexists in the same habitat as the white-tailed antelope ground squirrel. It is threatened by off-road vehicles, habitat disturbance, grazing pressure and conversion of its habitat to urban development.



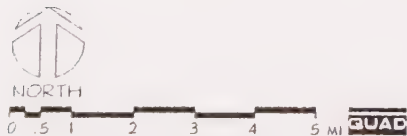
WILDLIFE

FIGURE



CALIFORNIA CITY GENERAL PLAN

OPEN SPACE / CONSERVATION ELEMENTS 1992-2012



- ★ EXISTING PARKS
- EXISTING GOLF COURSE
- △ PARK LAND
- CONSERVATION LAND

PARKS AND CONSERVATION LAND

FIGURE
13A

- 501.6 **Recreation:** City-owned and operated recreational facilities include two golf courses, community center, marina, Balsitis Park, Central Park swimming pool, tennis courts, handball courts, sports arena, Borax Bill Park, and a Little League ball park with three fields. Galileo Hill Park, a private recreation area, in the eastern section of the City, is operated by a private developer. Regional recreational opportunities in the western Mojave include Red Rock Canyon State Park and access to Sequoia National Forest.
- 501.7 **Scenic Resources:** Characteristic of its high desert location, California City's scenic resources are significant. The air is generally very clear in this area of California because of the prevailing wind pattern from west to east, and also the fact that wind is a relatively constant feature of the region's climate. The Tehachapi Mountains, a southern extension of the Sierra Nevada, provide a beautiful scenic backdrop to the west, while the Rand Mountain Range, a typical example of the stark mountain ranges found throughout the California Desert, can be seen to the north. Surrounding the community is the desert vegetation that many find very appealing as a scenic resource, particularly during the spring months of wet years when a carpet of wildflowers provides a display of vivid colors and textures.
- Twenty Mule Team Road was proposed as a Scenic Corridor during the 1970's; scenic vistas along the historic roadway include Castle Buttes, desert wildflowers, and a panoramic view from Galileo Hill. (Kern Council of Governments and City of California City, Scenic Highways Element of the California City General Plan, 1974.)
- 501.8 **Cultural Resources:** A Cultural Resources Records Search conducted by the California Archaeological Inventory Southern San Joaquin Valley Information Center (California State University, Bakersfield, May 7, 1992) indicated that within the California City corporate boundary the following cultural resources surveys have been recorded:
- California City South 7.5' Quadrangle: two surveys covering approximately 240 acres.
- California City North 7.5' Quadrangle: eight surveys covering approximately 480 acres.
- Galileo Hills 7.5' Quadrangle: three surveys covering approximately 1,100 acres.
- North Edwards 7.5' Quadrangle: one survey of 50 acres.

No surveys were recorded within the corporate boundaries on the Sanborn, Mojave NE, Boron, or Boron NW 7.5' Quadrangles.

Within the California City corporate boundaries, the following archaeological sites are recorded:

California City South 7.5' Quadrangle: one aboriginal quarry site.

California City North 7.5' Quadrangle: eight sites, quarries and lithic scatters, and two isolated finds.

Galileo Hills 7.5' Quadrangle: 19 sites, quarries, and lithic scatters.

North Edwards 7.5' Quadrangle: two sites, lithic scatters.

There are no sites within the corporate boundaries on the Sanborn, Mojave NE, Boron, or Boron NW 7.5' Quadrangles.

Hundreds of archaeological sites are recorded on Edwards Air Force Base, where numerous archaeological surveys have been carried out. Numerous sites and isolated finds are also recorded in the Rosamond, Mojave, and Cantil vicinity. Most have been discovered as a result of archaeological surveys.

There are no listed historic properties within the California City corporate boundaries. However, both Randsburg and Garlock are listed in the California Historic Landmarks due to the early historic mining in the area.

Very little of the land within the California City corporate boundaries has been inventoried for cultural resources, yet 30 sites are recorded. Archaeological surveys on Edwards Air Force Base and other small communities in the western Mojave Desert have resulted in the location of hundreds of prehistoric archaeological sites. The cultural resource sensitivity of the California City area appears to be very high.

502 GOALS

- 502.1 To preserve and protect open space resources that contribute to the well being of California City residents.
- 502.2 To preserve and protect conservation resources of sensitive plant and wildlife species that are unique to California City environs.

503 OBJECTIVES

- 503.1 Encourage maximum cooperation among all levels of government and private individuals in the management, conservation, and protection of open space resources.
- 503.2 Provide sufficient and adequate parks, school sites and recreational facilities to accommodate present and future needs of California City residents.
- 503.3 Maintain established policies for the proper management of lands where soil or geologic conditions pose risks to development.
- 503.4 Preserve historical and cultural resources which may exist and are of significant value to the community and to posterity.
- 503.5 Protect sensitive plant and wildlife species, in accordance with State and federal laws and regulations, and to provide for maintenance of supportive habitat for such species in balance with the needs of humans.
- 503.6 Promote the maintenance of the open character of California City.
- 503.7 Protect the community's environmental setting from deterioration, compromising the quality of life enjoyed by California City residents.
- 503.8 Promote the conservation and prudent use of water resources.

504 POLICIES

- 504.1 Plan and develop new park and recreation facilities at locations that complement existing and planned population centers and, where possible, develop parks in conjunction with school facilities.
- 504.2 Establish priorities for the development of planned parks based on anticipated community need and acquire and develop the proposed park sites in accordance with these priorities.
- 504.3 Encourage a diversity of uses for public parks to include a mix of active athletic facilities and passive open space uses.
- 504.4 Continue to promote and encourage water conservation to community businesses and residents.
- 504.5 Establish a water conservation program encouraging and promoting xeriscaping and municipal gray water usage.

- 504.6 Utilize the policies set forth in the Safety Element to assure the proper management of the existing open space lands which are prone to flooding and exhibit unstable soil conditions.
- 504.7 Encourage public and private efforts toward preserving structures or sites which are of historic value to the community.
- 504.8 Establish as a priority the set-aside of park and open space land as it was originally intended by the community master plan concept.
- 504.9 Establish in the first community as a park and open space priority those designated parcels of land including but not limited to the following tracts: 2069, 2117, 2119, 2120, 2159, 2161, 2191, 2223, 2225, 2226, 2228, 2436, 2447, 2779, 2811 and 2898.
- 504.10 Establish a set of decision guidelines to preserve and protect the loss of those designated park and open space parcels of land from urban development.
- 504.11 Galileo Hill and the surrounding base of the hill identified as conservation land and controlled development on the Land Use Element map shall be established as High Priority Areas for perpetual conservation and/or park use. This location represents a significant regional/community site benefiting the immediate surrounding community as well as the regional environs as intended in the original California City concept plan.

SAFETY ELEMENT
California City

600 SAFETY ELEMENT

601 INTRODUCTION

The California City Safety Element has been prepared for the purpose of protecting the community from any unreasonable risks associated with effects such as flooding, urban fires and geologic hazards known to the legislative body. The Safety Element aims at reducing death, injuries, property damage, and the economic and social dislocation resulting from hazards.

The Safety Element is the primary vehicle for relating local safety planning to land use decisions. Implementation of safety objectives will be incorporated into provisions of the California City Municipal Code to include zoning regulations, subdivision requirements and entitlement permits as a means to abate or mitigate safety hazards.

602 OVERALL OBJECTIVES OF THE SAFETY ELEMENT

602-01 Minimize personal injury and loss of life.

602-02 Minimize the potential for property damage.

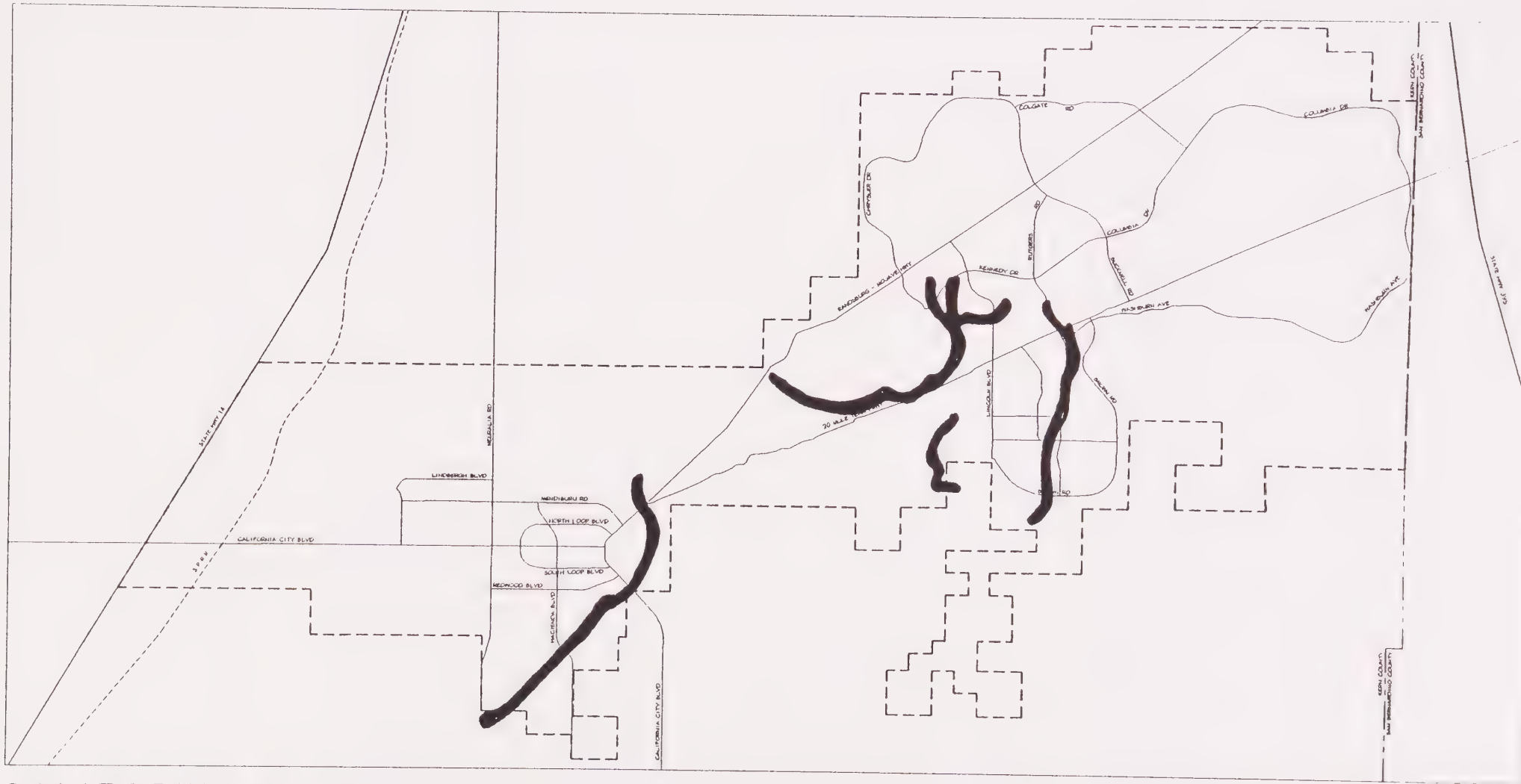
602-03 Protect the City and its residents from avoidable loss resulting from improper development in hazardous areas.

603 FLOOD HAZARDS

603-01 Introduction

Flood damage to properties is often the result of the improper use of flood-prone lands. Flood losses can take place in several ways. When a flood occurs, many types of land uses which are located within the flood-prone area may be damaged. More importantly, however, development in flood hazard areas usually increases the natural flood heights and velocities with resulting damage to upstream, downstream, and adjacent lands. Therefore, the potential costs of permitting improper uses on flood-prone lands can be considerable. One method of reducing these flood losses would be to limit development of lands within flood hazard areas.

Floodways and Drainage: There are no perennial streams in the Mojave Desert, and drainage channels are poorly defined due to sedimentation by wind-blown soils. The major flood channel in California City is Cache Creek, which flows northerly through the City, east of most of the existing development. The drainage area of Cache Creek upstream of California City is 163.4 square miles. Other channels include Tierra del Sol Creek, which drains 2.7 square miles within the City, Yerba Rusche Creek and its tributary, Great Circle Creek, which drain 5.0 square miles in the western portion of the developed area; Yerba Rusche Creek flows into Cache Creek north of the City. Peak



CALIFORNIA CITY GENERAL PLAN

SAFETY ELEMENT 1992-2012



FLOOD HAZARD AREAS

discharge-drainage area relationships for Cache Creek, Tierra del Sol Creek, Yerba Rusche Creek, and Great Circle Creek are shown in Table Six.

**TABLE SIX
SUMMARY OF DISCHARGES**

FLOODING SOURCE AND LOCATION	DRAINAGE AREA (Square Miles)	PEAK DISCHARGE (Cubic Feet Per Second)			
		10-Year	50-Year	100-Year	500-Year
Cache Creek at Downstream Limit of Study	163.40	1,900	5,300	7,800	16,400
Tierra del Sol Creek At Confluence With Cache Creek	2.69	450	1,700	2,800	9,290
Yerba Rusche Creek at Mendiburu Road	5.02	780	2,350	3,600	8,200
Great Circle Creek at Confluence with Yerba Rusche Creek	3.66	560	1,970	3,000	8,200

Source: FEMA, Flood Insurance Study, City of California City, California, Kern County, July 20, 1981.

Most of the existing flood control facilities for California City have been built in the developed western portion of the City. Protection from small magnitude flooding in some of the streets and along Tierra del Sol and Yerba Rusche Creeks is provided by trapezoidal channels; culverts are typically effective for low flows, but are generally inadequate to handle 10-year flows. Overbank flooding and flow over roadways occurs during high volume rainfalls, such as those that occurred during the winter of 1977-78 and during March 1991 and February 1992. The City has an ordinance restricting building within the 100-year flood plain, as designated on the Flood Hazard Boundary Map for California City. There are no federal, state, county, or local flood control projects in the community. (FEMA, Flood Insurance Study, City of California City, California, Kern County, Community Number 060440, July 20, 1981.)

603-02 Goal

To provide and maintain flood control protection for the safety, health and general welfare of the community.

603-03 Objectives

603-03.1 Minimize the potential for damage caused by inundation in flood hazard areas.

603-04 Policies

603-04.1 Ensure that residential, commercial and other land development is adequately protected from the hazards which occur from flooding and storm water runoff.

603-04.2 Encourage open space uses consistent with the character of the floodplain and discourage land uses which are inconsistent with floodplain hazards.

604 GEOLOGICAL HAZARDS

604-01 Introduction

Several geologic hazards may pose threats to the safety of California City residents. These hazards include expansive soils, weak soils, erosion and earth faults that surround the area.

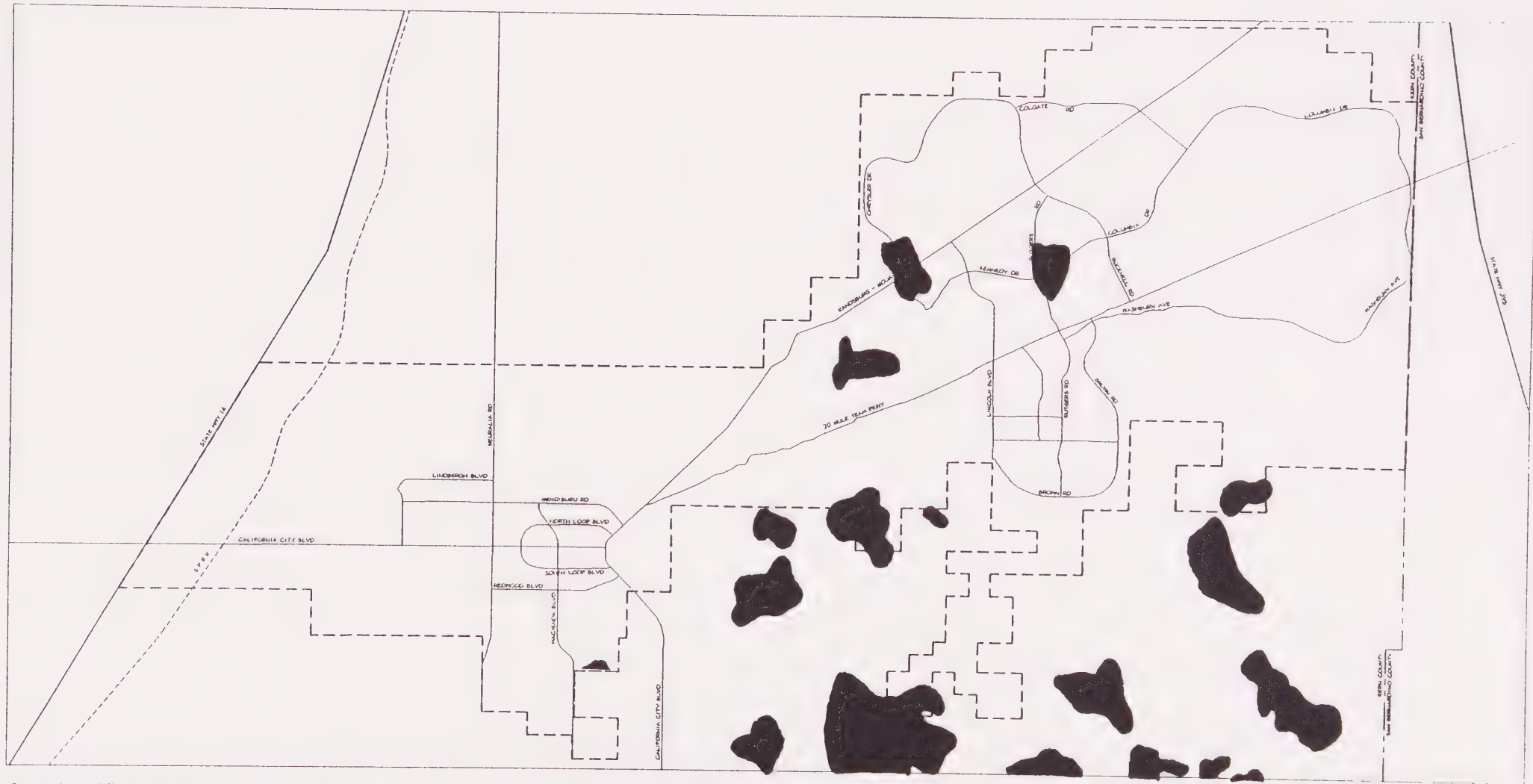
604-02 General Description of Geologic Hazards Within Planning Area

The City is located in the Antelope Valley near the Garlock Fault. It may be subjected to severe ground shaking when elastic strains accumulated within the earth are suddenly released along the Garlock or other major faults. The Garlock Fault is considered active because in this area it displaces quaternary sediments.

Shaking motion depends to a large extent on local ground conditions, degree of water saturation, etc., and may be as severe ten miles from the fault as immediately adjacent to it.

The $1,000 \pm$ foot thickness of sedimentary cover over the crystalline basement is composed of $700 \pm$ feet of younger, less consolidated sediments. This thickness and composition is conducive to the propagation of destructive seismic waves.

Given the seismic history and the close proximity of the Garlock Fault and its intertie with the dangerous San Andreas Fault, however, it can be said that California City is located in an area that is likely to experience significant earthquake activity in future years. Additionally, some scientists feel a major new fault is forming in the Mojave Desert, where five earthquakes have occurred along a single line north of the community of Joshua Tree since 1947. Running in a northerly direction from Joshua Tree, this potential fault may be located less than seventy miles to the east of California City and could rival the San Andreas Fault as a source of destructive quakes, according to researchers at Stanford University.

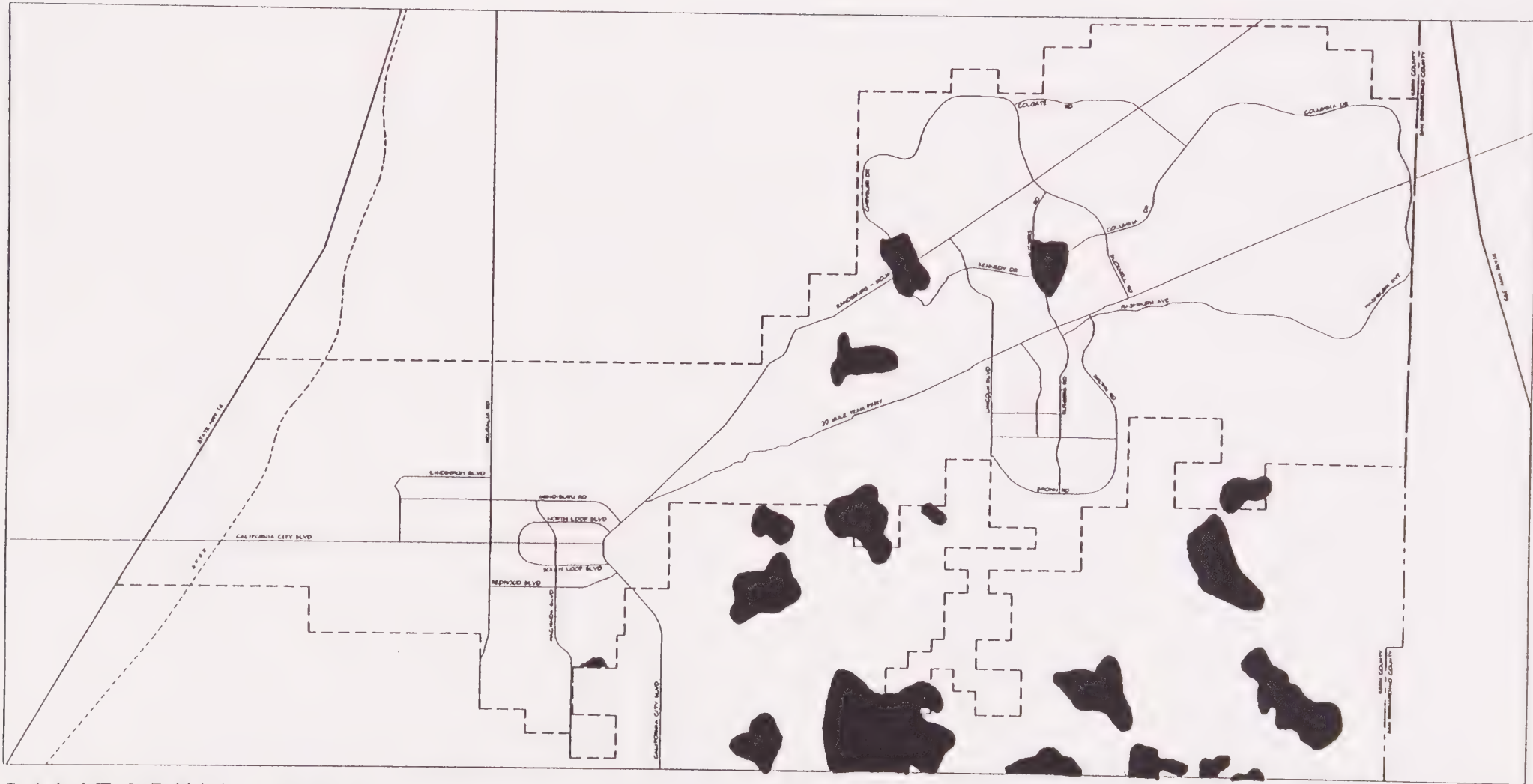


CALIFORNIA CITY
GENERAL PLAN
 SAFETY ELEMENT 1992-2012

- NONE TO SLIGHT
- ROUGH LAND, HAZARD VARIABLE

EROSION HAZARDS

FIGURE
 15



CALIFORNIA CITY
GENERAL PLAN
 SAFETY ELEMENT 1992-2012

- 0 TO 15%
- ROUGH LAND, SLOPE VARIES



SLOPE OF TERRAIN

California City is located at an elevation of about 2,400 feet mean sea level in the high desert of California, within the Antelope Valley portion of the Mojave Desert. The Antelope Valley is a triangular-shaped plain about 3,000 square miles in area bounded by the San Gabriel Mountains and the San Andreas fault to the south and the Tehachapi Mountains and the Garlock fault on the northwest. Most of the City's topography is that of gently sloping alluvial plains. A series of steep rock buttes occupies the desert floor in parts of the City, and several arroyos (or dry creeks), including Cache Creek, traverse the City. The natural slope of the land in the developed western portion of the City is northeasterly, ranging from 0.5 to 2.0 percent.

The Mojave Desert is a Cenozoic feature, probably formed during the Oligocene Epoch (about 40 million years ago) from movement along the San Andreas and Garlock faults. The broad alluvial basins that dominate the region today have been created by eroded materials from adjacent mountain ranges. Alluvial sediments reach a maximum depth of 4,000 feet in the Antelope Valley, and have been measured at about 1,000 feet in the California City area. The small hills, or buttes, that rise about the alluvial fill are remnants of ancient eroded mountains, and there are a number of playas, or dry lake beds, marking valley portions of the desert floor where imperceptible rises block drainage routes. (Norris & Webb, Geology of California, 1976)

Soils in the California City area include the following associations and characteristics (adapted from U.S. Department of Agriculture Soil Conservation Service, Soil Survey of Kern County California, Southeastern Part, 1976):

- Cajon-Arizo-Alko: Very deep and shallow, nearly level to strongly sloping, well drained and excessively drained soils; on alluvial fans, alluvial plains, and old terraces. These soils occur at elevations of 2,400 to 4,000 feet, and were formed in coarse and moderately coarse textured alluvium derived from granitic rock. They are used mainly for rangeland, recreation, wildlife habitat, and homesites, and are characterized by shallow soil depth and very low to moderate available water capacity. A sandy surface layer makes these soils susceptible to blowing.
- Cajon: Very deep, nearly level to strongly sloping, somewhat excessively drained soils; on alluvial fans and plains. These soils formed in coarse textured alluvium derived mainly from granitic rock, and occur at elevations from 2,000 to 3,500 feet. They are used for rangeland, recreation, wildlife habitat, and homesites, and in some areas are irrigated and used for pasture and alfalfa. These soils are also characterized by very low to moderate available water capacity, and susceptibility to blowing.
- Rosamond-DeStazo: Very deep, nearly level to moderately sloping, well drained soils; on flood plain and in basins. These soils formed in moderately coarse and moderately fine textured alluvium derived mainly from granitic rock, and are found at elevations from 2,000 to 3,000 feet. They are used for rangeland,

recreation, and wildlife habitat, and are irrigated in some areas to grow alfalfa. Irrigation is limited by moderately slow permeability characteristics of the soil, and highly calcareous underlying material. In some areas the soils are subject to soil blowing.

- Torriorthents-Rock outcrop: Shallow and very shallow, very steep, well drained soils and rock outcrop; on mountainous ridges. These soils occur on convex slopes at elevations ranging from 2,400 to nearly 4,200 feet, and were formed in coarse and moderately fine textured residuum weathered mainly from sandstone, granite, and basalt. Rock outcrops have slopes ranging from 50 to 75 percent, with vegetative growth limited to fractures in the rock structure. These areas serve as watersheds, with limited recreational and rangeland uses. The soils are characterized by limited soil depth, very low available water capacity, excessively steep slopes, lack of plant cover, and a hazard of erosion.
- Garlock-Neuralia: Very deep and deep, nearly level to moderately sloping, well drained soils; on old stream terraces, alluvial fans, and alluvial plains. These soils are used mainly for rangeland, wildlife habitat, recreation, and urban development, and are characterized by moderately slow permeability, and hazards of water erosion and soil blowing.

604-03 Goal

To protect the health, safety and welfare of California City residents from causes related to seismic activity and soil conditions.

604-04 Objective

Protect the lives and property of residents in California City by establishing land development policies which recognize the limitations of soils and necessity of establishing building requirements for seismic activity.

604-05 Policies

- 604-05.1 All development requiring a City permit should be subject to a preliminary soil report when located on land exhibiting potentially hazardous geologic conditions or where slopes exceed fifteen percent (15%). If the preliminary soil report indicates that soil conditions could be unstable, a soil investigation should be prepared indicating the suitability of any proposed or additional development on the site and any corrective action needed to prevent structural defects. The soil investigation should analyze the soil for texture, consistency, structure, permeability, shrink-swell potential, strength, and slope.

- 604-05.2 Development should be prohibited in areas where corrective measures to affect the geologic hazard are not feasible.
- 604-05.3 The City Ordinance shall be amended continually to reflect changes in policy and code requirements.

605 FIRE HAZARDS

605-01 Analysis of Fire Hazards and Fire Protection Services

Potentially, both structural and wildland fires could threaten life and property within California City. Structural fires commonly result from manmade causes and can threaten adjacent residential and commercial structures. Major wildland fires, however, are uncommon in the creosote bush-hop sage desert vegetation type that surrounds the developed areas of California City because of the sparseness of the vegetation and lack of available ground fuel. Thus, the potential for a major conflagration is relatively low, and wildland fires are not considered to be a significant hazard to life and property.

Structural fire hazards are primarily associated with residential and commercial buildings. These urban fires can start for a wide variety of reasons, including electrical shorts, carelessness and arson. In general, however, structural fire hazards are greatest in buildings which are old or substandard. As virtually all residential and commercial buildings have been constructed in accord with recently adopted building and fire codes, the risk of a major conflagration in the City is very low.

Fire protection in California City is provided by the City's own fire department. The department has one station located in the "First Community" which is manned by two full-time fighters on a 24-hour per day basis. There is also a department chief and a fire prevention officer who work normal eight-hour shifts, five days a week. Additionally, there are 2-3 trained volunteers available to assist the department at any given time. The department presently has one mini-pumper and two full-sized fire engines housed at the station.

According to department officials, approximately 100 fires are responded to annually, of which thirty percent are wildland fires and the balance are structural, automobile, trash and other types of fires. Of the thirty or so wildland fires occurring annually, about ten exceed one acre in size. In the past fifteen years, the only total loss of a structure in California City occurred in 1983, when a fire in the local museum went undiscovered until it was fully involved.

605-02 Goal

Protect the health, safety and welfare of California City residents from fire danger.

605-03 Objective

Minimize the loss of life and damage to property as a result of fire.

605-04 Policies

605-04.1 The City of California City should:

605-04.1.1 Continue to monitor water supply to insure adequacy of fire protection.

605-04.1.2 Continue to provide adequate fire flow as a suppression measure.

605-04.1.3 Continue to provide fire department training programs.

605-04.1.4 Continue to review land use development proposals for fire safety considerations.

605-04.1.5 Encourage the installation of heat and/or smoke detection early warning and fire suppression systems.

605-04.1.6 Continue to adopt and enforce the latest national building, plumbing, mechanical, and fire prevention codes.

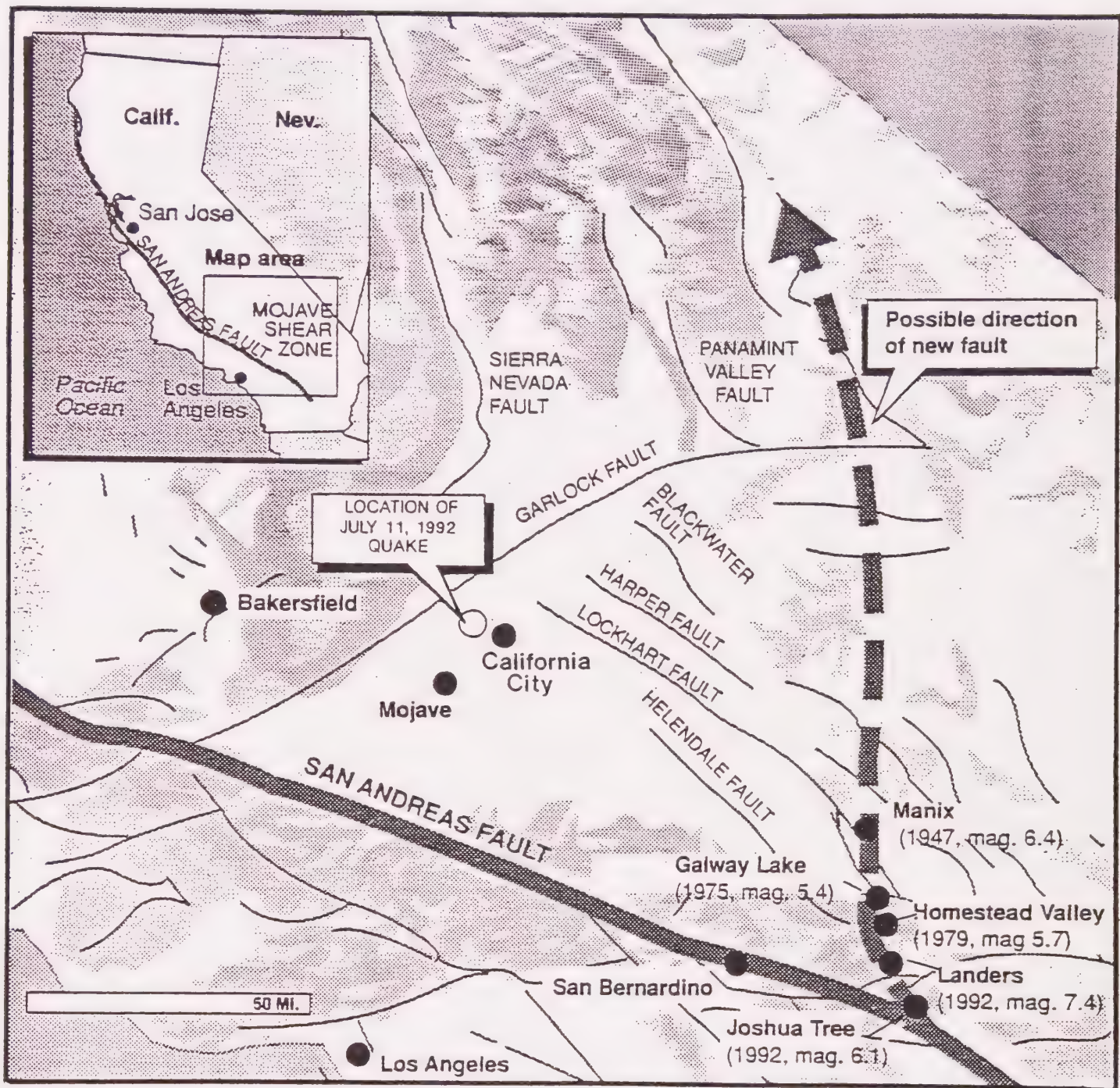
606 SEISMIC HAZARDS

606-01 Analysis of Seismic Hazards

California City is located in close proximity to the Garlock Fault, considered by scientists to be one of California's most dangerous faults. Running from its intersection with the San Andreas Fault in the southern San Joaquin Valley northeasterly to Death Valley, the Garlock Fault is capable of producing major quakes of more than 7.0 (Richter scale) in magnitude, according to seismologists from the U.S. Geological Survey.

The San Andreas Fault, California's most active and most dangerous, is located approximately 55 miles southwest of California City. Other faults, rated as relatively minor in nature, run roughly parallel to the San Andreas Fault in the area east and southeast of California City. These faults include the Blackwater, Harper, Lockhart and Helendale.

A moderate earthquake which measured 5.1 on the Richter scale occurred near the Garlock Fault on July 11, 1992. Its epicenter was located about three miles west of California City proper and minor damage such as wall cracks and items falling from shelves was reported by several California City residents. According to seismologists, the quake was not in the aftershock zones for either the 7.4 Landers quake or the 6.5 Big



Bear Lake quakes that occurred on June 28, 1992. The Landers quake was the largest in California in forty years when, in 1952, the Tehachapi quake caused major damage to Bakersfield and neighboring communities.

The California Division of Mines and Geology is in the process of evaluating the various regions of the State with respect to their potential for earthquake activity, and will be attempting to predict the severity of the maximum earthquake that may be anticipated. This program is just underway, however, and information is not likely to be available until mid-1993 or later.

Given the seismic history and the close proximity of the Garlock Fault and its intertie with the dangerous San Andreas Fault, however, it can be said that California City is located in an area that is likely to experience significant earthquake activity in future years. Additionally, some scientists feel a major new fault is forming in the Mojave Desert, where five earthquakes have occurred along a single line north of the community of Joshua Tree since 1947. Running in a northerly direction from Joshua Tree, this potential fault may be located less than 70 miles to the east of California City and could rival the San Andreas Fault as a source of destructive quakes, according to researchers at Stanford University.

606-02 Goal

Protect the health, safety and welfare of the community from causes related to seismic activity.

606-03 Objectives

606-03.1 Minimize serious physical damage to structures used for human occupancy and to critical facilities and structures where large numbers of people are apt to congregate.

606-03.2 Insure the continuity of vital services, functions, and facilities.

606-04 Policies

606-04.1 The personal safety of the people must take precedence over all other factors.

606-04.2 Structures designated for command control of emergency/disaster services should be designed to withstand a "maximum probable seismic event" and to remain operational.

606-04.3 Structures utilized for emergency services, schools, and hospitals should be designed to protect human life to the highest degree possible during a "maximum probable seismic event."

606-04.4 The local legislative body must continually update building regulations and City ordinance requirements to prevent the community from being adversely affected by significant seismic disturbances.

607 EMERGENCY SERVICES

607-01 Introduction

Emergency services planning is essential to disaster mitigation. Although emergency services planning can not prevent disasters, it can provide for coordinated public action during the time of disaster to reduce loss.

Seismic Hazards: The most direct earthquake hazard is the damage or collapse of buildings and other structures caused by groundshaking. Groundshaking is the vibration which radiates from the epicenter of an earthquake.

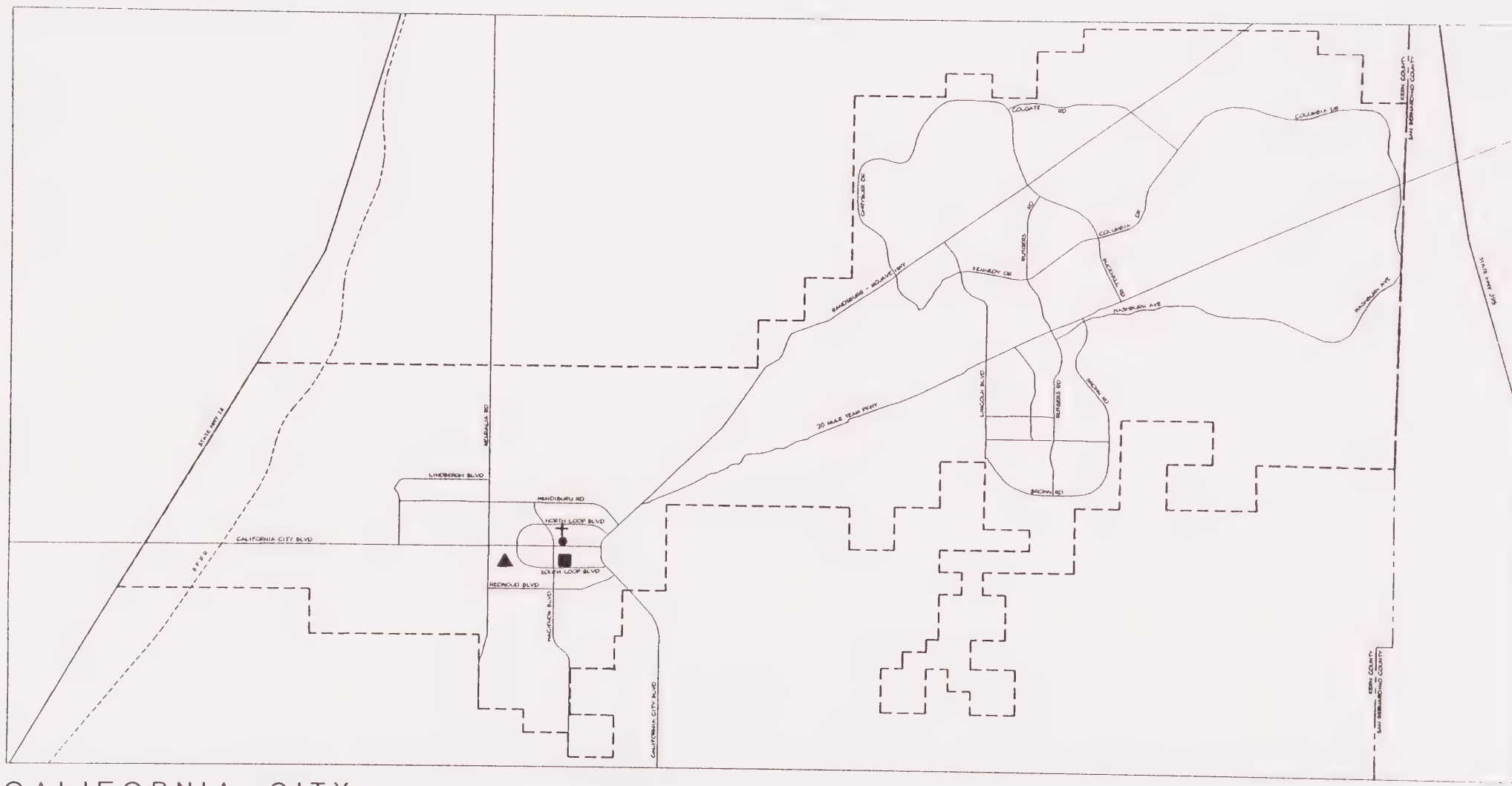
Unlike San Francisco, Santa Cruz and other cities damaged by recent earthquakes, California City does not have the additional problem of protecting residents living or working in older structures that were constructed prior to adoption of building codes requiring earthquake protection measures.

Most of the buildings in California City are one or two stories high and are of wood frame construction which is considered the most structurally resistant to earthquake damage.

Fire is often the major form of damage resulting from groundshaking effects. This devastation results largely from the combustible materials used in building construction and from inadequate firefighting capability resulting from ruptured water mains.

In addition to structural damage caused by groundshaking, there are other ground effects caused by the shaking. These are known as ground failure effects and include liquefaction, settlement, lateral spreading and lurch cracking.

Flooding Hazards: Typically, very little damage has occurred in California City as flooding within the developed portion of the community has been shallow with relatively slow velocities. Flooding in the winter of 1977-78 and the storm waters in March, 1991, and February, 1992, did overflow creek banks and flood some of the streets along Tierra del Sol and Yerba Rusche Creeks. Although these floods resulted in little, if any, structural damage, the City has not experienced a 100-year flood.



CALIFORNIA CITY GENERAL PLAN

SAFETY ELEMENT 1992-2012



- + MEDICAL
- ▲ POLICE
- FIRE
- CIVIC CENTER

EMERGENCY FACILITIES

FIGURE

A 100-year flood has a one percent probability of occurring in any year. This is considered to be a severe flood, but one with a reasonable possibility of occurrence for purposes of land use planning, property protection and human safety. The City regulates building construction within the 100-year flood plain which significantly reduces the risk of major damage to structures.

Aircraft Crash Hazard: California City Municipal Airport is located on 212 acres approximately four miles northwest of the civic center. Existing land use controls and zoning regulations ensure that:

- No structures or habitation will be permitted within the airport runway clear zones.
- No residential development will be allowed within noise impact zones.
- Within specific airport horizontal zones, no structures will exceed 150 feet above the airport runway.

Any crash landing of an aircraft is a potentially disastrous hazard. Any aircraft crash could create an accessibility hazard for rescue crews. Unintentional fuel dumps over populated areas would also pose a significant hazard.

Special Hazards: Much of the area within the confines of California City, including the developed area of the "First Community", was utilized during World War II as a bombing practice range by the U.S. Air Force. The "practice" bombs that were utilized were slightly smaller than a normal mortar shell and only a small percentage of them actually contained explosives. According to local fire department officials, approximately 3-4 of these practice bombs are found each year...primarily by residents who are completing landscaping tasks around their homes. Following the discovery of a bomb, authorities at the U.S. Army's Fort Irwin are contacted and a bomb disposal unit is dispatched to properly dispose of the potential hazard.

Although a singular occurrence to date, in 1983 a 500-pound bomb lying on the surface of the ground was discovered in an area southeast of the "First Community". It is not known how the bomb got there, but it was disposed of by the ordinance team from Fort Irwin. Although unlikely, other bombs of a similar size may exist in the large expanses of vacant land within the confines of California City.

Fire Protection: Fire protection is provided by the California City Fire Department. The fire station is located at 20890 Hacienda Boulevard, at the southeast corner of Hacienda Boulevard and California City Boulevard. The Department provides fire protection to all lands within the City limits.

Staffed with eight firefighters and four paid-per-call volunteers, the Department maintains two firefighters on duty at all times.

The Fire Department's equipment includes two Class A 1,250-gallon per minute (gpm) pumper engines and one 250-gpm small advance vehicle.

Dispatching of fire units is also provided by a "911" system through the Police Department's communications center. The California City Fire Department's average response time in the southwest portion of the City is typically three to five minutes. In the northeastern portion of the City, the maximum response time is sixteen minutes.

Public protection classifications are designated by the Insurance Services Office (ISO). The ISO considers three primary factors in their rating system: fire department location, personnel, and equipment (50 percent), water supply and fire flow capacity (40 percent), and communications capabilities (10 percent). Ratings are based on a scale of 1 to 10, with 1 being the best possible protection. The California City Fire Department maintains an ISO rating of 6 within the City.

In addition to fire suppression, the Fire Department's services include fire prevention, public education, fire hydrant maintenance, hazardous materials response, and nuisance abatement.

Fire flow requirements and hydrant placement are controlled by the Uniform Fire Code. Fire flow requirements are established for single family homes, multi-family units and for individual commercial or institutional structures.

The California City Fire Department has mutual aid agreements with the Kern County Fire Department with a station in Mojave and also with fire stations in Randsburg and Johannesburg.

Police Services: The California City Police Department provides law enforcement within the City limits. The 2,000 square-foot police station is located at 8190 California City Boulevard. Dispatching of police units via a "911" system is accomplished through facilities located in the Department's station.

The Department employed twelve sworn officers as of May 1992, including supervisory officers, investigative staff and the Police Chief. This staffing level provides a ratio of 1.5 sworn officers per 1,000 population.

Using one officer per patrol vehicle, the Police Department operates between one and four patrol beats. Response times for the Police Department are categorized according

to the severity of the reported offense or complaint. The Department's response time for priority one calls, constituting a major crime or incident-in-progress requiring immediate dispatch, is typically three to four minutes in the southwest portion of the City and ten to twelve minutes in the eastern section of the community.

The City plans to construct a new police building in the area north and west of City Hall. The building will be 15,000 square feet in size and construction is expected to begin in early 1993.

Law enforcement in the surrounding unincorporated area is the responsibility of the Kern County Sheriff's Department. Coroner's services are provided through the County by the Sheriff's Department. The court system and jails are operated and maintained by Kern County.

The California Highway Patrol and Sheriff's Substation, headquartered in Mojave, patrol the state highways and county roads in eastern Kern County.

Emergency Response: An Emergency Disaster Response Plan has been developed and adopted by the City. The Plan describes in detail the lines of authority and responsibilities of City officials and outlines emergency response procedures, affected organizations and describes evacuation routes. If an event is declared a community-wide emergency, the City Manager is designated as the Emergency Services Director and the City's Fire Chief is second in command.

California City has no hospital or emergency medical treatment facility. For such services, residents must travel to Lancaster or Edwards AFB.

Search and Rescue

California City has a Search and Rescue Unit which was organized approximately six years ago with bylaws permitting a sixty member search and rescue team. Overview of the Search and Rescue team is performed by the California City Police Department and works in conjunction with other local emergency organizations. At full strength, the Search and Rescue Unit has components for air rescue, canine (K-9) rescue and ground-heavy equipment rescue. The membership and component strength are fully dependent upon volunteer personnel and as a result varies in organizational size and component preparedness. Numerous individuals have specialized training and certifications related to emergency activities. The Search and Rescue Unit has a meeting once a month to discuss organizational matters and emergency preparedness topics.

607-02 Goal

To provide and implement effective emergency services that will protect the health, safety and welfare of California City residents.

607-03 Objectives

- 607-03.1 Provide for the continuity of government.
- 607-03.2 Provide a basis for direction and control of emergency operations.
- 607-03.3 Repair and restore essential systems and services.
- 607-03.4 Provide for the protection, use, and distribution of remaining resources.
- 607-03.5 Coordinate operations with the emergency organizations of other jurisdictions.

607-04 Policies

- 607-04.1 The City should continue to maintain a disaster emergency services plan which coordinates California City disaster services with those of the Kern County Emergency Services Plan.

NOISE ELEMENT

California City

700 NOISE ELEMENT

701 INTRODUCTION

701.1 Purpose and Scope

The Noise Element of the General Plan is a planning document which provides a policy framework for addressing potential noise impacts encountered in the planning process.

The content of the Noise Element and the methods used in its preparation have been determined by the requirements of Section 65302 (f) of the California Government Code and by *Guidelines for the Preparation and Content of Noise Elements of the General Plan* adopted and published by the California Office of Noise Control (ONC) in 1976. The ONC Guidelines require that major noise sources and areas containing noise-sensitive land uses be identified and quantified by preparing generalized noise exposure contours for current and projected conditions.

According to the Government Code requirements, noise exposure information should be included in the Noise Element for the following major noise sources:

1. Highways and freeways
2. Primary arterials and major local streets
3. Railroad operations
4. Aircraft and airport operations
5. Local industrial facilities
6. Other stationary sources

Noise-sensitive uses identified by the Government Code and by the City of California City include the following:

1. Residential development
2. Schools
3. Hospitals, nursing homes
4. Churches
5. Libraries

The Noise Element is directed at minimizing future noise conflicts. A Noise Ordinance, on the other hand, is directed at resolving existing noise conflicts. A Noise Ordinance may be used to address noise levels generated by existing industrial, commercial, agricultural and residential uses, which are not regulated by federal or state noise level standards. The regulation of noise sources such as traffic on public roadways, railroad line operations and aircraft in flight is preempted by existing federal and/or state regulations, meaning that such sources generally may not be addressed by a Noise Ordinance. The Noise Element addresses the *prevention* of noise conflicts from all of these sources.

701.2 Relationship to Other Elements of the General Plan

The Noise Element is related to the Land Use, Housing, Circulation and Open Space Elements of the General Plan. Recognition of the interrelationship of noise and these four mandated elements is necessary to prepare an integrated general plan and to initiate changes which will reduce noise exposure to acceptable levels in areas where noise may presently exceed the levels set forth by the adopted policies of the Noise Element. The relationship between these elements is briefly discussed below:

1. Land Use: An objective of the Noise Element is to provide noise exposure information for use in the Land Use Element. When integrated with the Noise Element, the Land Use Element will show acceptable land uses in relation to existing and projected noise levels.
2. Housing: The Housing Element considers the provision of adequate sites for new housing and standards for housing stock. Since residential land uses are noise-sensitive, the noise exposure information of the Noise Element must be considered when planning the locations of new housing. The State Noise Insulation Standards may influence the locations and construction costs of multi-family dwellings, which should be considered by the Housing Element.
3. Circulation: The circulation system, which is a major source of noise, must be correlated with the Land Use Element. This is especially true for roadways which carry significant numbers of trucks. Noise exposure will thus be a decisive factor in the location and design of new transportation facilities, and in the mitigation of noise produced by existing facilities upon existing and planned land uses.
4. Open Space: Excessive noise adversely affects the enjoyment of recreational pursuits in designated open space, particularly in areas where quiet is a valued part of the recreational experience. Thus, noise exposure should be considered in planning for this kind of open space use. Conversely, open space can be used to buffer noise-sensitive uses from noise sources by providing setbacks and visual screening.

701.3 Noise And Its Effects On People

Appendix A provides a discussion of the fundamentals of noise assessment, the effects of noise on people and criteria for acceptable noise exposure, and is a reference for use by the City during the review of documents or proposals which refer to the measurement and effects of noise.

701.4 Definitions

1. A-Weighted Sound Level: All sound levels referred to in this policy document are in A-weighted decibels. A-weighting de-emphasizes the very low and very high

frequencies of sound in a manner similar to the human ear. Most community noise standards utilize A-weighting, as it provides a high degree of correlation with human annoyance and health effects.

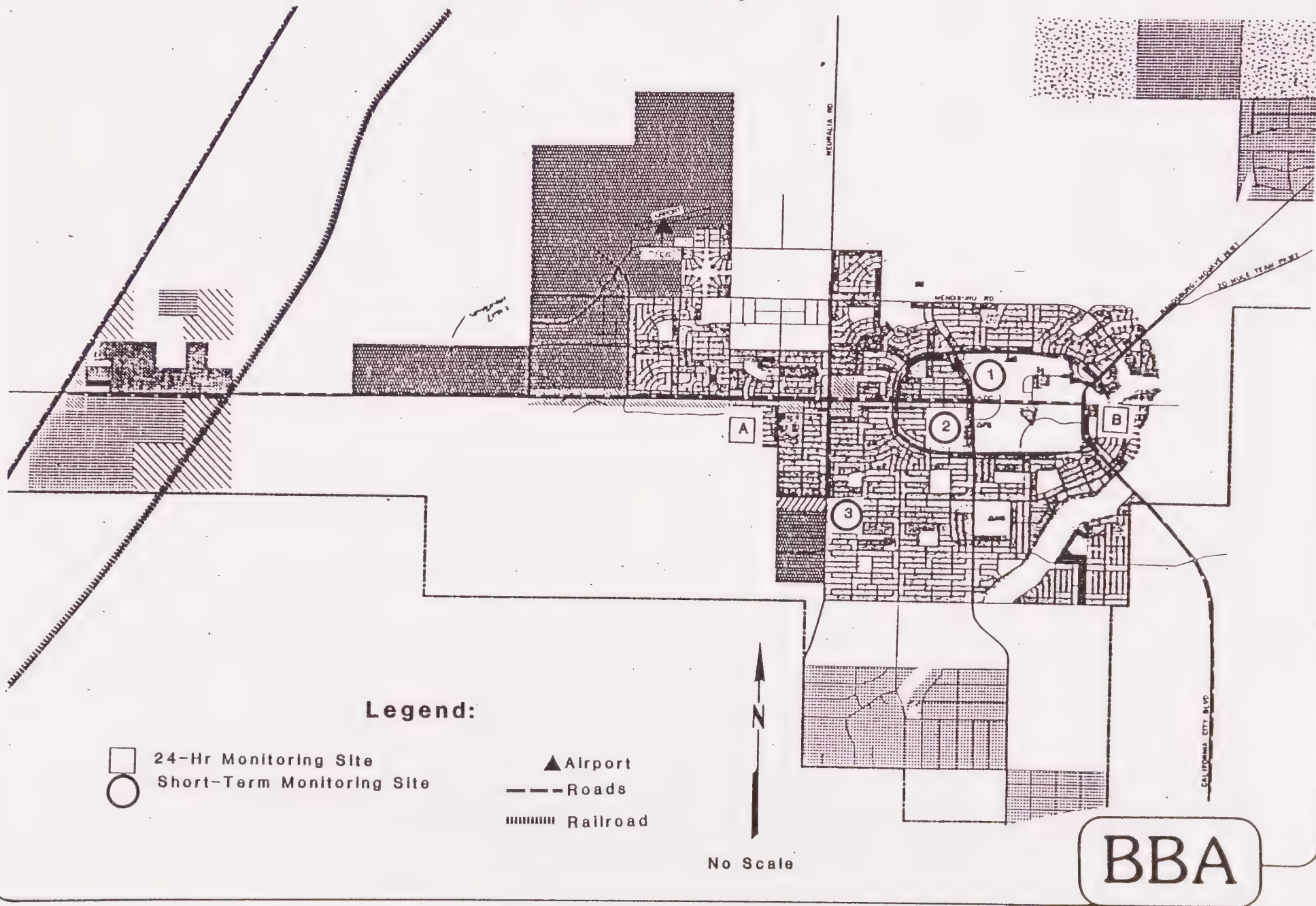
2. Community Noise Equivalent Level (CNEL): The average equivalent sound level during a 24-hour day, obtained after addition of approximately five decibels to sound levels in the evening from 7:00 p.m. to 10:00 p.m. and ten decibels to sound levels in the night before 7:00 a.m. and after 10:00 p.m.
3. Day/Night Average Sound Level (L_{dn}): The average equivalent sound level during a 24-hour day, obtained after addition of ten decibels to sound levels in the night after 10:00 p.m. and before 7:00 a.m.
4. Equivalent Sound Level (L_{eq}): The sound level containing the same total energy as a time varying signal over a given sample period. L_{eq} is typically computed over 1, 8 and 24-hour sample periods.
5. New Development: Projects requiring land use or building permits, but excluding remodelling or additions to existing structures.
6. Noise-Sensitive Land Use: Residential land uses, transient lodging, schools, libraries, churches, hospitals and nursing homes.
7. Outdoor Activity Areas: Patios, decks, balconies, outdoor eating areas, swimming pool areas, yards of dwellings and other areas which have been designated for outdoor activities and recreation.
8. Stationary Noise Source: Any fixed or mobile source not preempted from local control by existing federal or state regulations. Examples of such sources include agricultural, industrial and commercial facilities and vehicle movements on private property.
9. Transportation Noise Source: Traffic on public roadways, railroad line operations and aircraft in flight. Control of noise from these sources is preempted by existing federal or state regulations. However, the effects of noise from transportation sources may be controlled by regulating the location and design of adjacent land uses.

702 EXISTING AND FUTURE NOISE ENVIRONMENT

702.1 Overview of Sources

Based on discussions with City staff, the requirements of the Government Code and field studies conducted during the preparation of the Noise Element, it was determined that potentially significant sources of community noise within the City of California City are traffic on State Route 14 and local roads, operations on the Southern Pacific Railroad line, aircraft operations

Figure 19
Significant Noise Sources & Noise Monitoring Sites
California City



from Edwards Air Force Base, and aircraft operations from the California City Municipal Airport. The locations of the potentially significant noise sources are shown on Figure 19.

Noise levels in California City are generally low, with ambient sound produced mainly by automobiles, aircraft, and occasionally by construction activities. Growth within the community may produce a concern for noise along major roadways and near the airport. Caltrans generates noise contours for developed areas along State Highways, and the City assesses noise effects in the Airport Master Plan and Community Land Use Plan for the airport area.

The noise of primary concern to the residents of California City are the sonic booms produced by aircraft being tested by Edwards Air Force Base, a major Department of the Air Force installation located only a few miles south of the community. According to Edwards AFB officials, sonic booms in the area of California City average about five per day, but the number is entirely dependent upon the testing schedule of the facility. There are days when no sonic booms occur, and others when as many as fifteen may be heard.

Immediately to the east of California City, Edwards AFB has established the Black Mountain Supersonic Corridor. Most of the sonic booms heard by California City residents are from airplanes being tested within the boundaries of that corridor. The corridor, at its western end, has a 10,000 foot above ground level (agl) minimum as they approach California City. Additionally, the High Altitude Supersonic Corridor has been established by Edwards AFB running in a ENE direction above the base itself and traversing across the eastern portion of the Black Mountain Corridor. The agl minimum for supersonic aircraft flights in this corridor is 30,000 feet.

Besides their startling effect on humans, sonic booms can produce physical damage to structures and their contents. Most damage, however, is confined to broken windows, cracked or falling stucco and broken glassware, dishes or similar items. Cooperating with California City to address the damage problem, Edwards AFB has had an office open for several years to handle the claims of residents resulting from sonic boom damage. If the claim can be substantiated, direct payment is made by Edwards AFB to the claimant. According to Edwards AFB officials, claims from California City residents have totalled approximately \$10,000 annually in recent years.

Edwards AFB officials indicate that the level of aircraft testing is not likely to change in the foreseeable future. There are few areas in the nation where ideal weather conditions for flying are combined with large areas of relatively uninhabited land to provide the opportunity for the testing of supersonic jet aircraft. For this reason, the increased activity in the Space Shuttle Program of NASA (Edwards AFB is the preferred landing site), it does not appear that the facility will be reducing operations, at least through the end of the century.

The Plan seeks to minimize the potential adverse impact of industrial noise by concentrating new industrial uses in the vicinity of the Municipal Airport where they are generally removed from most residential areas and by recommending the use of landscaping and setbacks where planned

industrial uses adjoin planned residential uses. The Plan further recommends the new industrial uses which are proposed for development along California City Boulevard be carefully evaluated to insure that they do not have a detrimental effect on surrounding commercial and residential uses.

Existing noise problems within the City are not significant. Additional future noise, however, can be anticipated with the expansion of existing and construction of new major noise generating facilities as well as through the increased use of existing street routes.

Increase in noise from the California City Municipal Airport may gradually occur from future airport flights. Noise impacts are anticipated to be very minimal, however, due to its low activity and predominant use by single propeller engine aircraft. The land uses surrounding the Municipal Airport are predominately open space and scattered single family dwellings.

702.2 Methods Used to Develop Noise Exposure Information

According to the Government Code and ONC Guidelines, noise exposure contours should be developed in terms of the Day-Night Average Level (L_{dn}) or Community Noise Equivalent Level (CNEL) for transportation-related noise sources. Both of these descriptors represent the weighted energy noise level for a 24-hour day after inclusion of a 10 dB penalty for noise levels occurring at night between the hours of 10:00 p.m. and 7:00 a.m. The CNEL descriptor also includes a penalty of about 4.8 dB for noise levels occurring during the evening hours of 7:00 p.m. and 10:00 p.m. The CNEL descriptor was developed for the quantification of aircraft noise, and its use is required when preparing noise exposure maps for airports within the State of California. The CNEL and L_{dn} descriptors are generally considered to be equivalent to each other for most community noise environments within ± 1.0 dB. The L_{dn} descriptor has been used in this Noise Element to quantify noise from the above-described major noise sources identified by the City for study.

Analytical noise modeling techniques were used to develop generalized L_{dn} contours for major roadways within the City for existing and future conditions. Analytical noise modeling techniques generally make use of source-specific data, including average levels of activity, hours of operation, seasonal fluctuations, and average levels of noise from source operations. Analytical methods have been developed for many environmental noise sources, including roadways, railroad line operations, railroad yard operations, industrial plants and aircraft/airport operations. Such methods will produce reliable results as long as data inputs and assumptions are valid for the sources being studied.

The noise exposure information developed during the preparation of the Noise Element does not include all conceivable sources of industrial, commercial or agricultural noise within the City, but rather focuses on the existing sources of noise which have been identified by the City as being significant. As the policies of this Noise Element are applied in the future, it is likely that other potentially significant sources will be identified.

702.3 Roadways

The Federal Highway Administration (FHWA) Highway Traffic Noise Prediction Model (FHWA-RD-77-108) was used to develop L_{dn} contours for State Highway 14 and local roads. The FHWA Model is the analytical method currently favored by most state and local agencies, including Caltrans, for highway traffic noise predication. The Model is based upon reference energy emission levels for automobiles, medium trucks (2 axles) and heavy trucks (3 or more axles), with consideration given to vehicles volume, speed, roadway configuration, distance to the receiver, and the acoustical characteristics of the site. The FHWA Model was developed to predict hourly L_{eq} values for free-flowing traffic conditions, and is generally considered to be accurate within ± 1.5 dB. The Model assumes a clear view of traffic with no shielding at the receiver location. To predict L_{dn} values, it is necessary to determine the hourly distribution of traffic for a typical day and adjust the traffic volume input data to yield an equivalent hourly traffic volume. The Calveno traffic noise emission curves were used as recommended by Caltrans to more accurately calculate noise levels generated by California traffic.

For all roadways being studied, existing (1991 or 1992) and future (2012) annual average daily traffic (AADT) volumes, the day/night traffic distribution, speeds and percentages of trucks were obtained from Caltrans or from the City.

Distances from the center of the roadways to the 60 and 65 dB L_{dn} contours along with input data used during the traffic noise modelling process are shown on Table Seven.

TABLE SEVEN

**DISTANCE TO L_{dn} CONTOURS AND TRAFFIC DATA
CITY OF CALIFORNIA CITY**

Roadway	AADT		D%/N% ²	%MT ³	%HT ⁴	Speed (MPH)	Distance to L _{dn} Contours (Feet) ¹			
							1990		2012	
	1991/1992	2012					65 dB	60 dB	65 dB	60 dB
SR 14:										
N. of California City Blvd.	5600	12,270	86/14	4	14	55	115	248	194	418
S. of California City Blvd.	8200	17,967	86/14	4	14	55	148	320	250	539
California City Blvd.										
SR 14 to Randsburg-Mojave	5000	25,000	86/14	2	2	50	55	119	162	349
Randsburg Mojave to SR 58	3500	22,000	86/14	2	2	50	44	94	149	321
North Loop Blvd.										
California City Blvd. to Hacienda	3300	11,050	92/8	2	2	45	30	64	67	144
Hacienda to Randsburg-Mojave	2200	8750	92/8	2	2	45	23	49	57	123
Redwood Blvd.										
Neuralia to California City Blvd.	1000	3500	87/13	2	2	45	16	34	36	78
Neuralia Road										
California City Blvd. to Poppy	1160	4900	91/9	2	2	45	15	33	40	86
Redwood to California City Blvd.	2000	7800	91/9	2	2	45	22	48	55	118

TABLE SEVEN (continued)

**DISTANCE TO L_{dn} CONTOURS AND TRAFFIC DATA
CITY OF CALIFORNIA CITY**

	AADT		D%/N% ²	%MT ³	%HT ⁴	Speed (MPH)	Distance to L _{dn} Contours (Feet) ¹			
							1990		2012	
Roadway	1991/1992	2012					65 dB	60 dB	65 dB	60 dB
South Loop Blvd.										
California City Blvd. to Hacienda	2500	8600	86/14	2	2	45	30	64	68	146
Hacienda to California City Blvd.	900	6100	86/14	2	2	45	15	32	54	116
Hacienda Blvd.										
N. Loop to S. Loop	900	5800	96/4	2	2	45	11	23	37	80
S. Loop to Redwood	625	2000	96/4	2	2	45	8	18	18	39
Randsburg-Mojave Road										
California City Blvd. to N. Loop	2500	10,200	91/9	2	2	45	26	55	65	141
N. Loop to Mendiburu	600	3100	91/9	2	2	45	10	21	60	64

¹Distances are from center of roadway²Day/Night traffic split (day is defined as 7am-10pm and night as 10pm-7am)³Medium Trucks⁴Heavy Trucks

Sources: Caltrans and City of California City

702.4 Railroads

The Southern Pacific Railroad travels in a north-south direction through California City. According to the S.P. Trainmaster's office in Bakersfield, approximately four trains per day pass through the city currently. By 2012, the number is expected to double. No information is available on the time distribution of the trains. It is assumed that they would be distributed randomly through the day. Noise levels from railroad operations in the city were quantified using the analytical method developed in 1973 by Wyle Laboratories (Wyle Laboratories Report WCR-73-5). The Wyle methodology calculates noise exposure based on reference noise level data for various types of trains under different operating conditions, distance from the tracks, speed and the characteristics of the track the trains pass over. According to the Wyle methodology and the frequency of operation provided by the S.P. Railroad, the 65 and 60 dB L_{dn} contours would be located approximately 100 and 280 feet, respectively, from the tracks for 1992 train operations. The 65 and 60 dB L_{dn} contours would be located 270 and 420 feet from the tracks for 2012 train operations.

702.5 California City Municipal Airport

The Master Plan for the California City Municipal Airport prepared in 1976 did not include noise exposure information for aircraft operations. Aircraft based at the airport are generally single- or twin-engine small propeller-driven aircraft. The 1976 Master Plan estimated the number of powered aircraft operations by 1995 will range from 25,700 to 71,900. The land surrounding the airport is designed for industrial purposes, so there is no possibility of noise conflicts immediately adjacent to the airport. A new Master Plan is being prepared for the airport. If noise exposure information is prepared as a part of the new Master Plan, it should be included in the Noise Element.

702.6 Edwards Air Force Base

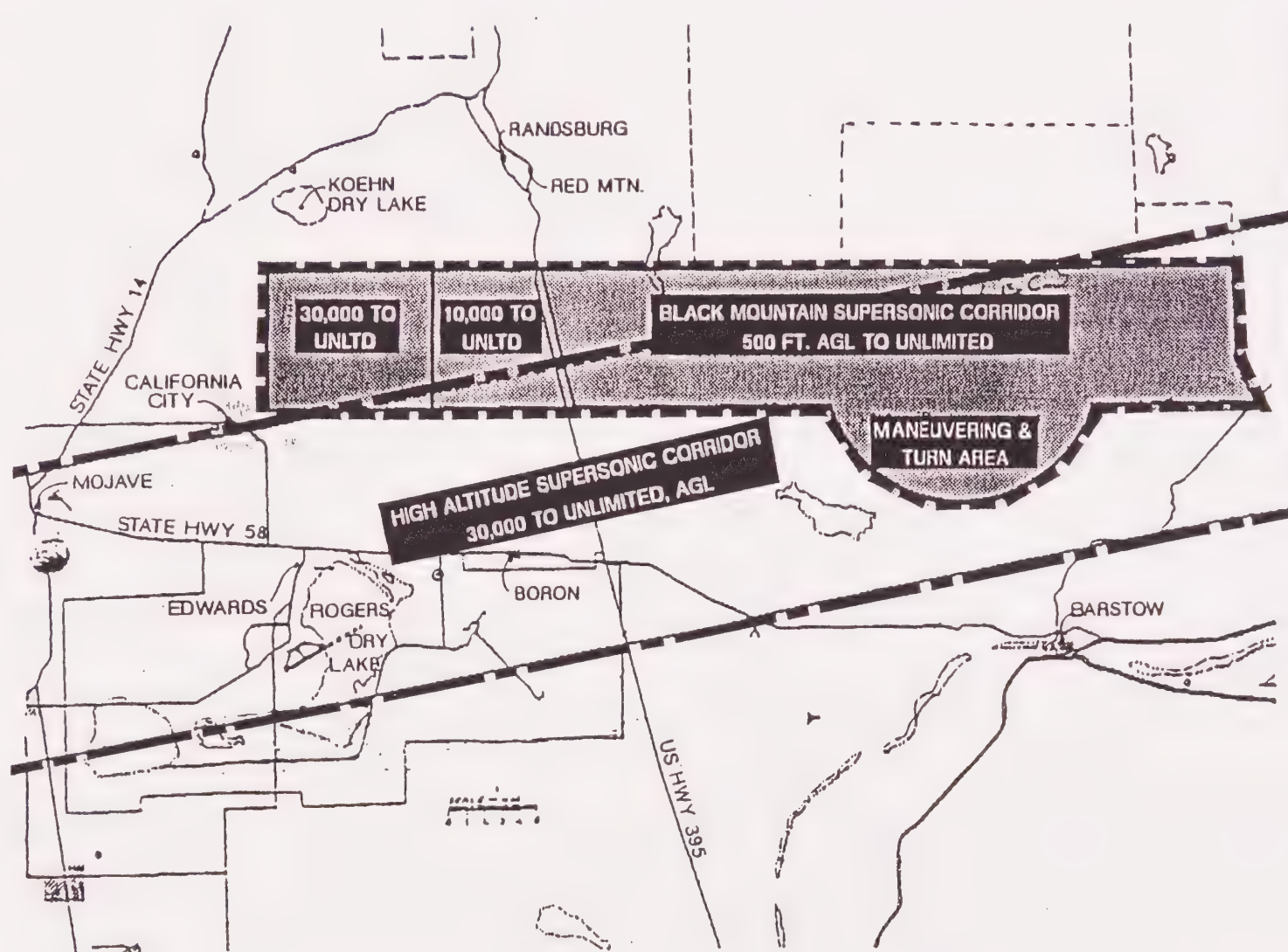
Edwards Air Force Base is located a few miles south of California City. Noise exposure information in terms of the L_{dn} or CNEL contours is not available from the Air Force.

The noise of primary concern to the residents of California City are the sonic booms produced by aircraft being tested by Edwards Air Force Base. According to Edwards AFB officials, sonic booms in the area of California City average about 5 per day, but the number is entirely dependent upon the testing schedule of the facility. There are days when no sonic booms occur, and others when as many as fifteen may be heard.

Immediately to the east of California City, Edwards AFB has established the Black Mountain Supersonic Corridor. Most of the sonic booms heard by California City residents are from airplanes being tested within the boundaries of that corridor (see Figure). The corridor, at its western end, has a 10,000 foot above ground level (AGL) minimum altitude requirement for aircraft flights as they approach U.S. Highway 395 from the east, and a 30,000 AGL minimum as they approach California City. Additionally, a High Altitude Supersonic Corridor has been

Figure 20

Location Of Supersonic Aircraft Corridors Near California City



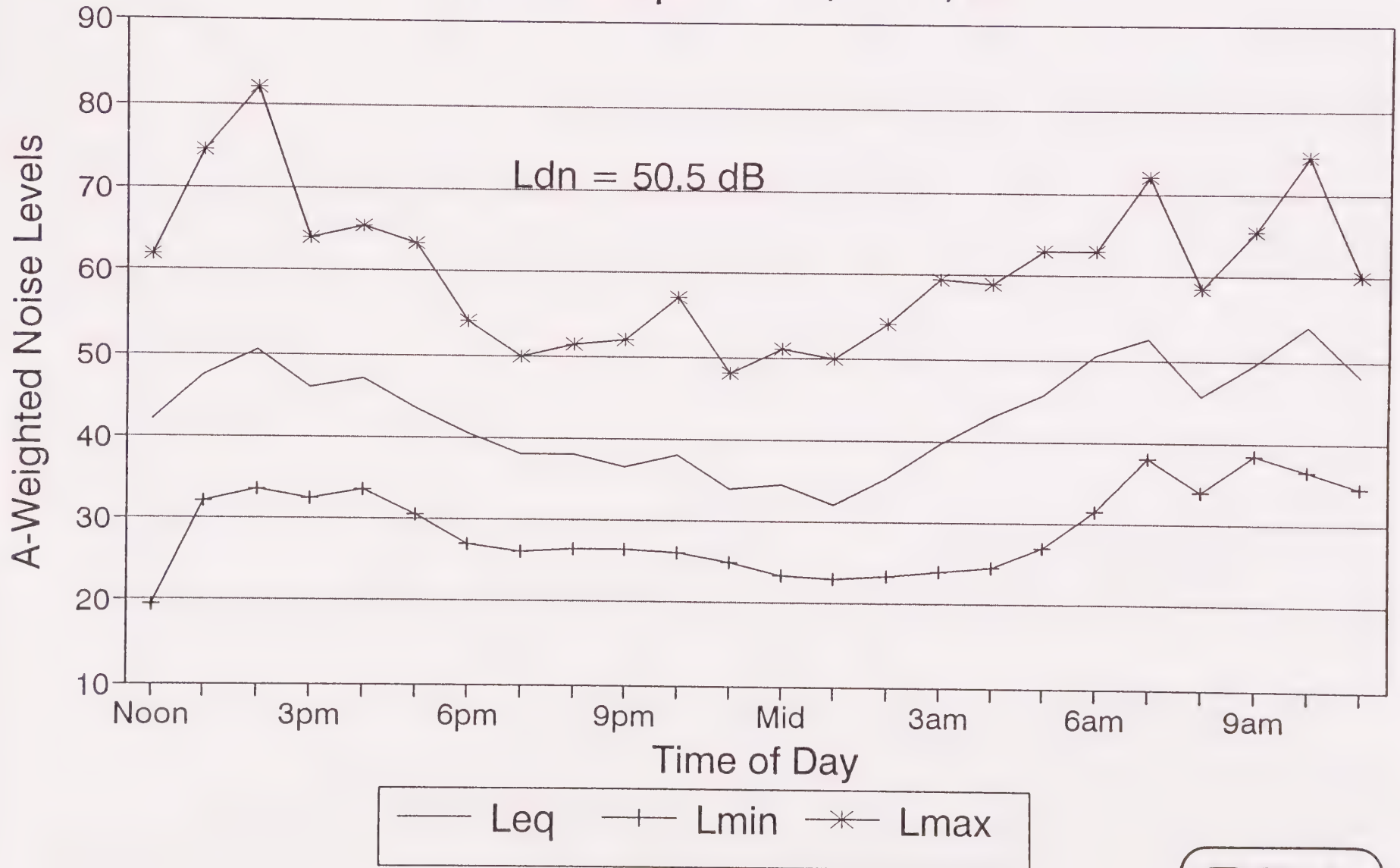
(Map Courtesy of Edwards AFB)

BBA

Figure 21

Hourly Noise Levels

7109 Catalpa -- 11/9-10/92

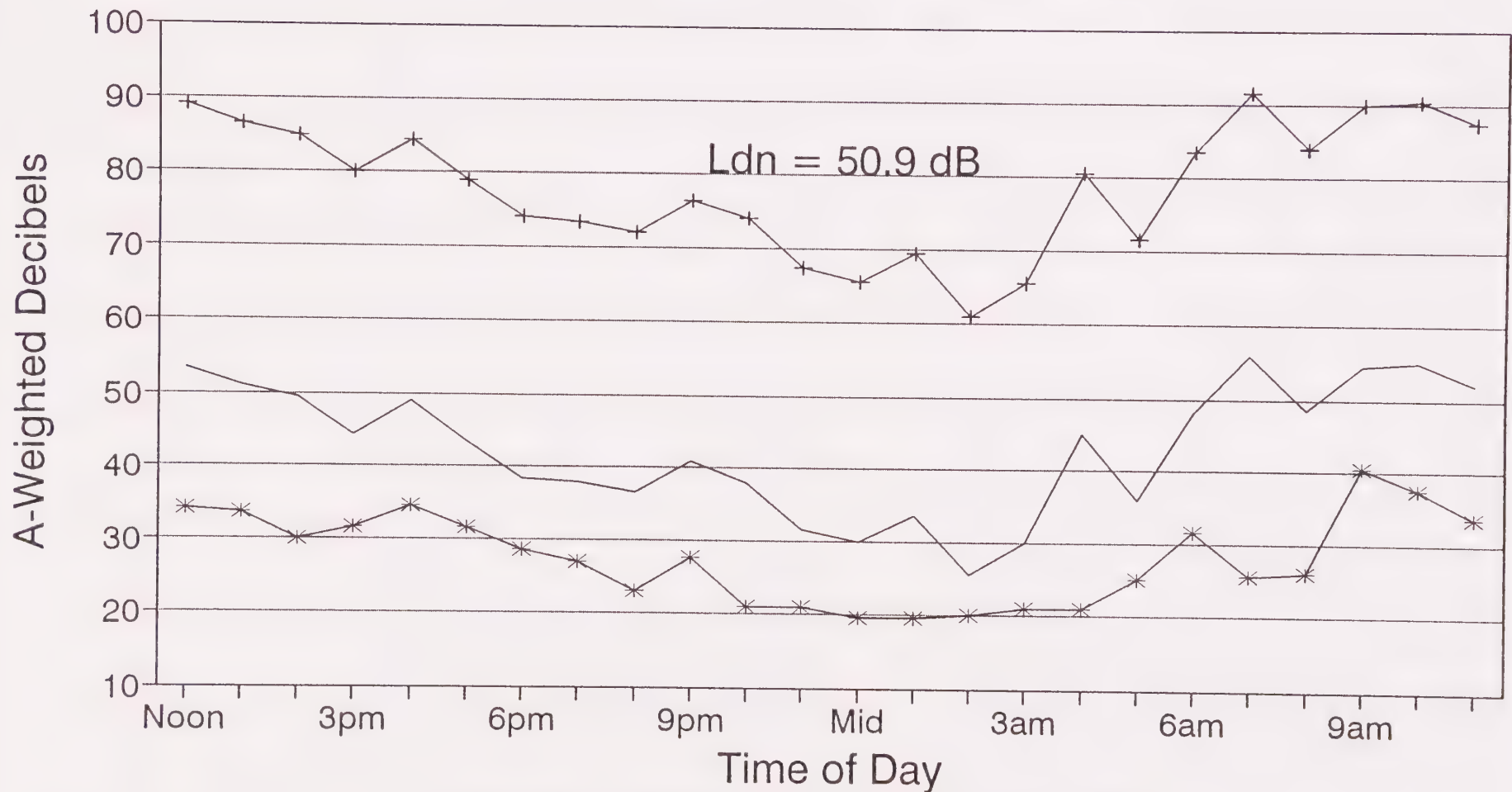


BBA

Figure 22

Hourly Noise Levels

10717 Aspen -- 11/9-10/92



BBA

established by Edwards AFB (see Figure) running in a ENE direction above the base itself and traversing across the eastern portion of the Black Mountain Corridor. The AGL minimum for supersonic aircraft flights in this corridor is 30,000 feet.

Beside their startling effect on humans, sonic booms can produce physical damage to structures and their contents. Most damage, however, is confined to broken windows, cracked or falling stucco and broken glassware, dishes or similar items. Cooperating with California City to address the damage problem, Edwards AFB has had an office open for several years to handle the claims of residents resulting from sonic boom damage. If the claim can be substantiated, direct payment is made by Edwards AFB to the claimant. According to Edwards AFB officials, claims from California City residents have totalled approximately \$10,000 annually in recent years.

Edwards AFB officials indicate that the level of aircraft testing is not likely to change in the foreseeable future. There are few areas in the nation where ideal weather conditions for flying are combined with large areas of relatively uninhabited land to provide the opportunity for the testing of supersonic jet aircraft. For this reason, and the increased activity in the Space Shuttle Program of NASA (Edwards AFB is the preferred landing site), it does not appear that the facility will be reducing operations, at least through the end of the century.

702.7 Community Noise Survey

A community noise survey was conducted in the City during October and November 1992 to document background noise levels in areas where noise-sensitive land uses are located. Short-term monitoring was conducted once during the daytime (7:00 a.m.-10:00 p.m.) and once during the nighttime (10:00 p.m.-7:00 a.m.) so that estimates of the L_{dn} could be prepared. Two long-term sites were established to record the variation of noise levels through a full 24-hour period. The data collected during the survey included the L_{eq} and the observed minimum and maximum noise levels. Noise monitoring sites, measured noise levels and estimated L_{dn} values at each site are listed in Table Eight. Hourly variations in noise levels at the long-term monitoring site are shown in Figures 21 and 22. Monitoring site locations are shown in Figure 19.

Results of the community noise survey indicate that existing background noise levels in many areas of the City that contain noise-sensitive land uses are relatively quiet when the wind is not blowing. Sites 1-4 were measured during windy conditions. Resulting noise levels consequently were quite high. To preserve quiet conditions, noise level standards and policies have been adopted to prevent degradation of the existing noise environment as much as possible.

TABLE EIGHT
SUMMARY OF COMMUNITY NOISE SURVEY DATA

Site #	Location	Level, dBA				
		L_D	L_N	L_{max} (Source)	L_{min} (Source)	L_{dn}
1	Hacienda & Heather	53	45	65 (wind)	40 (wind)	52-56*
2	Ulrich School	53	49	63 (wind)	45 (wind)	54-58*
3	Tamarak & First	55	48	63 (wind)	45 (wind)	54-58*
A**	7109 Catalpa	45	39	87 (unknown)	23 (unknown)	51**
B**	10717 Aspen	46	38	87 (unknown)	19 (unknown)	51**

L_D = L_{eq} for one 15-minute sample obtained between 7:00 a.m. and 10:00 p.m. except for Sites A and B where 24-hour monitoring was conducted.

L_N = L_{eq} for one 15-minute sample obtained between 10:00 p.m. and 7:00 a.m. except for Sites A and B where 24-hour monitoring was conducted.

* L_{dn} estimated from L_D and L_N

** 24-hour monitoring site.

Source: Brown-Buntin Associates, Inc.

703 Goals

- 703.1 To protect the citizens of the City from the harmful and annoying effects of exposure to excessive noise.
- 703.2 To protect the economic base of the City by preventing incompatible land uses from encroaching upon existing or planned noise-producing uses.
- 703.3 To preserve the tranquility of residential areas by preventing noise-producing uses from encroaching upon existing or planned noise-sensitive uses.
- 703.4 To educate the citizens of the City concerning the effects of exposure to excessive noise and the methods available for minimizing such exposure.

704 Objectives

- 704-01 Identify maximum acceptable noise levels compatible with various land use designations.
- 704-02 Develop a policy framework necessary to achieve and maintain a healthful noise environment.

705 Policies

- 705.1 New development of noise-sensitive land uses shall not be permitted in areas exposed to existing or projected future levels of noise from transportation noise sources which exceed 65 dB L_{dn} in outdoor activity areas and 45 dB L_{dn} in interior spaces.
- 705.2 Noise created by new transportation noise sources, including roadway improvement projects, shall be mitigated so as not to exceed 65 dB L_{dn} within the outdoor activity areas and 45 dB L_{dn} in interior spaces of existing noise sensitive land uses.
- 705.3 New development of noise-sensitive land uses shall not be permitted where the noise level from existing stationary noise sources exceeds the noise level standards of Table Nine.
- 705.4 Noise created by new proposed stationary noise sources or existing stationary noise sources which undergo modifications that may increase noise levels shall be mitigated so as not to exceed the noise level standards of Table Nine on lands designated for noise-sensitive uses. This policy does not apply to noise levels associated with agricultural operations.

TABLE NINE
MAXIMUM ALLOWABLE NOISE EXPOSURE-STATIONARY NOISE SOURCES¹

	Daytime (7 a.m. to 10 p.m.)	Nighttime (10 p.m. to 7 a.m.)
Hourly L_{eq} , dB	55	50
Maximum level, dB	75	70

¹As determined at the property line of the receiving land use. When determining the effectiveness of noise mitigation measures, the standards may be applied on the receptor side of noise barriers or other property line noise mitigation measures.

706 Implementation Measures

To achieve compliance with the policies of the Noise Element, the City of California City shall undertake the following implementation program. The implementation program focuses on the prevention of new noise-related land use conflicts by requiring that new development be reviewed to determine whether it complies with the policies in Chapter 3.

- 706.1** The City shall review new public and private development proposals to determine conformance with the policies of this Noise Element.
- 706.2** Where the development of a project may result in land uses being exposed to existing or projected future noise levels exceeding the levels specified by the policies of the Noise Element, the City shall require an acoustical analysis early in the review process so that noise mitigation may be included in the project design. For development not subject to environmental review, the requirements for an acoustical analysis shall be implemented prior to the issuance of a building permit. The requirements for the content of an acoustical analysis are given in Appendix B.
- 706.3** The City shall develop and employ procedures to ensure that noise mitigation measures required pursuant to an acoustical analysis are implemented in the development review and building permit processes.
- 706.4** The City shall develop and employ procedures to monitor compliance with the policies of the Noise Element after completion of projects where noise mitigation measures have been required.

- 706.5** The City shall enforce the State Noise Insulation Standards (California Code of Regulations, Title 24) and Chapter 35 of the Uniform Building Code (UBC) concerning interior noise exposure for multi-family housing, hotels and motels.
- 706.6** The City shall request the California Highway Patrol, the sheriff's office and the police department to actively enforce the California Vehicle Code sections relating to adequate vehicle mufflers and modified exhaust systems.
- 706.7** The City shall periodically review and update the Noise Element to ensure that noise exposure information and specific policies are consistent with changing conditions within the City and with noise control regulations or policies enacted after the adoption of this element.

APPENDIX A

NOISE AND ITS EFFECTS ON PEOPLE

California City

APPENDIX A

NOISE AND ITS EFFECTS ON PEOPLE

Fundamentals of Noise Assessment:

Noise is often defined simply as unwanted sound, and thus is a subjective reaction to characteristics of a physical phenomenon. The descriptors of community noise in current use are the results of many years of effort to translate objective measurements of sound into measures of subjective reaction to noise. Before elaborating on these descriptors, it is useful to discuss some fundamental concepts of sound.

Sound is defined as any pressure variation in air that the human ear can detect. If the pressure variations occur frequently enough (at least 20 times per second), they can be heard and hence are called sound. The number of pressure variations per second is called the frequency of sound, and is expressed as cycles per second, now called Hertz (Hz) by international agreement.

The speed of sound in air is approximately 770 miles per hour, or 1,130 feet/second. Knowing the speed and frequency of a sound, one may calculate its wavelength, the physical distance in air from one compression of the atmosphere to the next. An understanding of wavelength is useful in evaluating the effectiveness of physical noise control devices such as mufflers or barriers, which depend upon either absorbing or blocking sound waves to reduce sound levels.

To measure sound directly in terms of pressure would require a very large and awkward range of numbers. To avoid this, the decibel (dB) scale was devised.

The decibel scale uses the hearing threshold as a point of reference, defined as 0 dB. Other sound pressures are then compared to the reference pressure, and the logarithm is taken to keep the numbers in a practical range. Use of the decibel scale allows a million-fold increase in pressure to be expressed as 120 dB. Another useful aspect of the decibel scale is that changes in levels (dB) correspond closely to human perception of relative loudness.

The perceived loudness of sounds is dependent upon many factors, including sound pressure level and frequency content. In the range of usual environmental noise levels, perception of loudness is relatively predictable, and can be approximated by weighting the frequency response of a sound level measurement device (called a sound level meter) by means of the standardized A-weighting network. There is a strong correlation between A-weighted sound levels and community response to noise. For this reason, the A-weighted sound level has become the standard tool of environmental noise assessment. Figure A-1 illustrates typical A-weighted sound levels due to recognizable sources.

It is common to describe community noise in terms of the "ambient" noise level, which is defined as the all-encompassing noise level associated with a given noise environment. A common statistical tool to measure the ambient noise level is the average, or equivalent, sound level (L_{eq}), which is the sound level corresponding to a steady-state A-weighted sound level containing the same total energy as a time-varying signal over a given time period (usually one hour). The L_{eq} is the foundation of the composite noise descriptors such as L_{dn} and CNEL, and shows very good correlation with community response to noise.

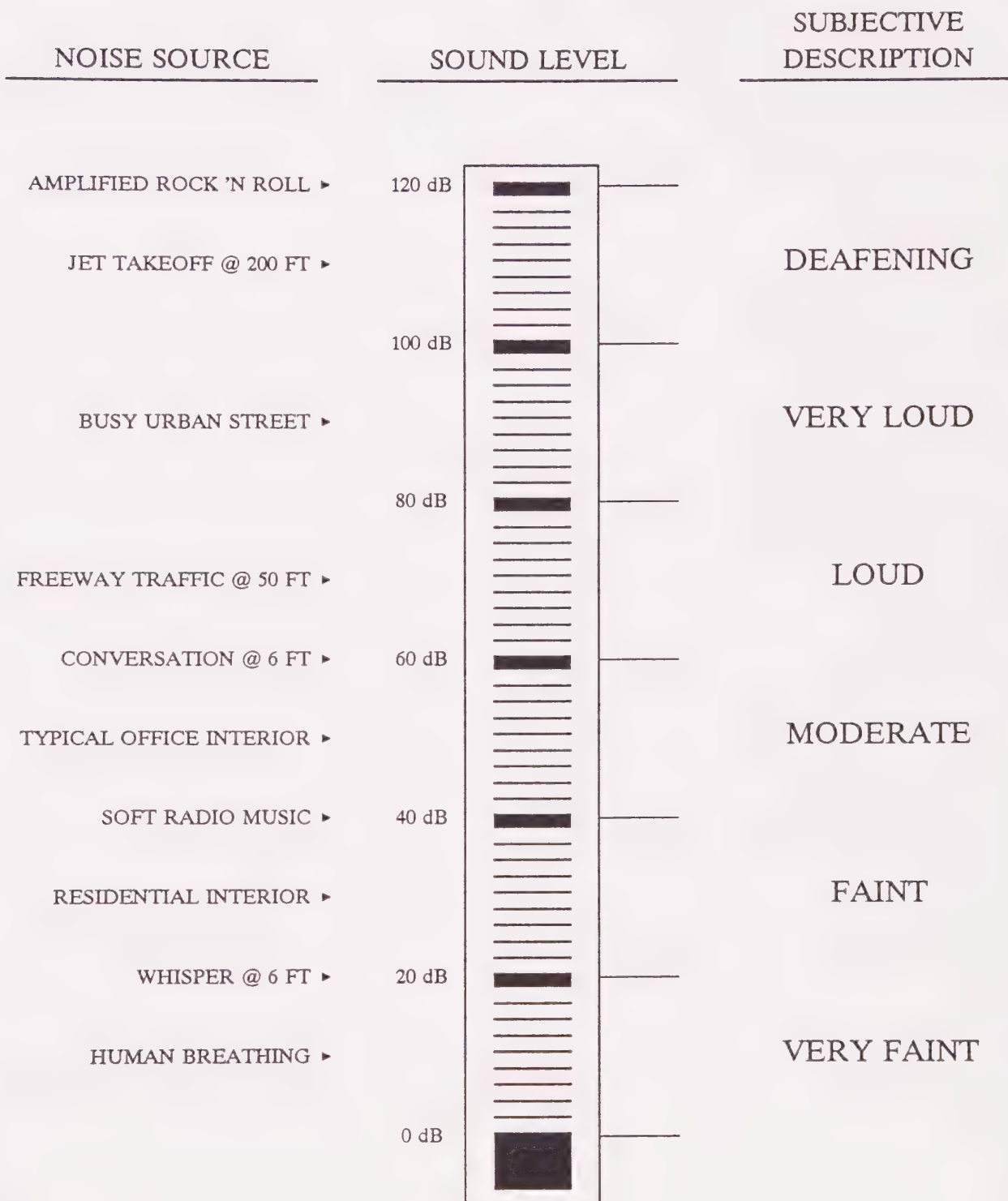
Two composite noise descriptors are in common use today: L_{dn} and CNEL. The L_{dn} (day-night average level) is based upon the average hourly L_{eq} over a 24-hour day, with a +10 decibel weighting applied to nighttime (10:00 p.m. to 7:00 a.m.) L_{eq} values. The nighttime penalty is based upon the assumption that people react to nighttime noise exposures as though they were subjectively twice as loud as daytime exposures. The CNEL (Community Noise Equivalent Level), like L_{dn} , is also based upon the weighted average hourly L_{eq} over a 24-hour day, except that an additional 4.77 decibel penalty is applied to evening (7:00 p.m. to 10:00 p.m.) hourly L_{eq} values.

The CNEL was developed for the California Airport Noise Regulations, and is applied specifically to airport/aircraft noise assessment. The L_{dn} scale is a simplification of the CNEL concept, but the two will usually agree, for a given situation, within 1 dB. Like the L_{eq} , these descriptors are also averages and tend to disguise variations in the noise environment. Because L_{dn} and CNEL presume increased evening or nighttime sensitivity, they are best applied as criteria for land uses where nighttime noise exposures are critical to the acceptability of the noise environment, such as residential developments.

Noise in the community has often been cited as being a health problem, not in terms of actual physiological damage, such as hearing impairment, but in terms of inhibiting general well-being and contributing to undue stress and annoyance. The health effects of noise in the community arise from the interference with human activities such as sleep, speech, recreation, and tasks demanding concentration or coordination. When community noise interferes with human activities or contributes to stress, public annoyance with the noise source increases, and the acceptability of the environment for people decreases. This decrease in acceptability and the threat to public well-being is the basis for land use planning policies directed towards the prevention of exposure to excessive community noise levels. There are also economic affects of community noise: reduction in property values, inefficiency in the workplace and lost hours due to stress.

To control noise from existing fixed sources, many jurisdictions have adopted community noise control ordinances. Such ordinances are intended to abate noise nuisances and to control noise from existing sources. They may also be used as planning tools if applied to the potential creation of a nuisance, or to potential encroachment of sensitive uses upon noise-producing facilities. Community noise control ordinances are generally designed to resolve noise problems on a short-term basis (usually by means of hourly noise level criteria), rather than on the basis of 24-hour or annual cumulative noise exposures.

FIGURE A-1
EXAMPLES OF SOUND LEVELS



Criteria for Acceptable Noise Exposure:

The *Guidelines for the Preparation and Content of the Noise Element of the General Plan* (Reference 1), includes recommendations for exterior and interior noise level standards to be used by local jurisdictions to identify and prevent the creation of incompatible land uses due to noise. The State *Guidelines* contain a land use compatibility table which describes the compatibility of different land uses with a range of environmental noise levels in terms of L_{dn} or CNEL. An exterior noise environment of 50 to 60 dB L_{dn} or CNEL is considered to be "normally acceptable" for residential uses according to those guidelines. The recommendations in the State *Guidelines* also note that, under certain conditions, more restrictive standards may be appropriate. As an example, the standards for quiet suburban and rural communities may be reduced by 5 to 10 dB to reflect lower existing outdoor noise levels.

The U.S. Environmental Protection Agency (EPA) also prepared guidelines for community noise exposure in the publication *Information on the Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety* (Reference 2). These guidelines are based upon assumptions regarding acceptable noise levels which consider occupational noise exposure as well as noise exposure in the home. The guidelines recognize an exterior noise level of 55 dB L_{dn} as a goal to protect the public from hearing loss, activity interference, sleep disturbance and annoyance. The EPA notes, however, that this level is not a regulatory goal, but is a level defined by a negotiated scientific consensus without concern for economic and technological feasibility or the needs and desires of any particular community. The EPA and other governmental agencies have adopted suggested land use compatibility guidelines which indicate that residential noise exposures of 55 to 65 dB L_{dn} are within acceptable limits.

For control of noise nuisances, a community noise control ordinance is the most appropriate tool. The State Office of Noise Control has prepared a *Model Community Noise Control Ordinance* (Reference 3) which contains recommended noise standards in terms of "time-weighted" sound levels. The time-weighting concept allows discrimination of both short- and long-term noise exposures, and sets allowable levels for each. The *Model* recommends more stringent standards for residential land uses than for commercial and industrial, with the most stringent standards recommended for "rural suburban" situations. The primary exterior noise standard for rural residential uses is 50 dB in the daytime hours (7 a.m. to 10 p.m.), and 40 dB at night. The standard is expressed in terms of the level exceeded for 30 minutes of an hour, equivalent to the median level, or L_{50} . This ordinance format is successfully applied in many California cities and counties.

The U.S. Environmental Protection Agency has also prepared a Model Community Noise Control Ordinance (Reference 4), using the "Equivalent A-weighted Sound Level" (L_{eq}) as the means of defining allowable noise level limits. The EPA model contains no specific

recommendations for local noise level standards, but reports a range of L_{eq} values as adopted by various local jurisdictions. The mean daytime noise standard reported by the EPA is 56.75 dB (L_{eq}); the mean nighttime noise standard is 51.76 dB (L_{eq}). This ordinance format has been successfully applied by the City and County of San Diego and by many other jurisdictions looking for a simplified approach to the enforcement of a local noise control ordinance.

In addition to the A-weighted noise level, other factors should be considered in establishing criteria for noise sensitive land uses. For example, sounds with noticeable tonal content such as whistles, horns, or droning or high-pitched sounds may be more annoying than the A-weighted sound level alone will suggest. Many noise standards apply a penalty, or correction, of 5 dB to such sounds. The effects of unusual tonal content will generally be more of a concern at nighttime, when residents may notice the sound in contrast to previously-experienced background noise.

Because many rural residential areas experience very low noise levels, residents may express concern about the loss of "peace and quiet" due to the introduction of a sound which was not audible previously. In very quiet environments, the introduction of virtually any change in local activities will cause an increase in noise levels. A change in noise level and the relative loss of "peace and quiet" is the inevitable result of land use or activity changes in such areas. Audibility of a new noise source and/or increases in noise levels within recognized acceptable limits are not usually considered to be significant noise impacts, but these concerns should be addressed and considered in the planning and environmental review processes.

Table A-1 is commonly used to show expected public reaction to changes in environmental noise levels. This table was developed on the basis of test subjects' reactions to changes in the levels of steady-state pure tones or broad-band noise, or to changes in levels of a given noise source. It is probably most applicable to noise levels in the range of 50 to 70 dB, the usual range of voice and interior noise levels. It is probably not directly applicable to public perception of identifiable intrusive noise sources in very quiet environments because of the difference in frequency content between background noise sources and intrusive sounds, as well as the fact that the absolute amount of energy required to make a given change in sound pressure level is much smaller at low noise levels than at higher levels. Table A-1 should therefore only be applied in a general manner to show the relationship between changes in sound energy, sound pressure levels and subjective reaction.

The comparisons of subjective reaction outlined in Table A-1 are not applicable to noise exposures which are very quiet or very loud. For example, a whisper which is increased by 10 decibels, e.g., from 20 dB to 30 dB, remains a whisper, and would still be described as quiet. In contrast, an increase in the noise level of a diesel locomotive from 90 dB to 100 dB would be a change from a loud noise to a very loud noise. Thus the subjective reaction to a 10 dB change in either case may be different, even though the change in level is the same.

TABLE A-1

SUBJECTIVE REACTION TO CHANGES IN NOISE LEVELS OF SIMILAR SOURCES

Increase in Sound Pressure Level, dB	Relative Increase in Acoustical Energy	Subjective Reaction
1	1.26 times	Minimum Detectable Change (Lab)
3	2.0 times	Usually Noticeable Change
5	3.2 times	Definitely Noticeable Change
10	10.0 times	Twice as Loud as Before

Sources: Various, reported by Brown-Buntin Associates, Inc.

REFERENCES

1. California Department of Health Services, *Guidelines for the Preparation and Content of the Noise Elements of the General Plan*, 1990 (included in the 1990 State of California General Plan Guidelines, State Office of Planning and Research).
2. U.S. Environmental Protection Agency, *Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety*, March, 1974.
3. California Department of Health, Office of Noise Control, *Model Community Noise Control Ordinance*, April, 1977.
4. U.S. Environmental Protection Agency, *Model Community Noise Control Ordinance*, September, 1975.

APPENDIX B

**REQUIREMENTS FOR
AN ACOUSTICAL ANALYSIS**

California City

APPENDIX B

REQUIREMENTS FOR AN ACOUSTICAL ANALYSIS

An acoustical analysis prepared pursuant to the Noise Element shall:

- A. Be the financial responsibility of the applicant.
- B. Be prepared by a qualified person experienced in the fields of environmental noise assessment and architectural acoustics.
- C. Include representative noise level measurements with sufficient sampling periods and locations to adequately describe local conditions. Where actual field measurements cannot be conducted, all sources of information used for calculation purposes shall be fully described. When the use being studied is a commercial use, all noise sources related to the service and maintenance of the facility shall be considered, including parking lot and landscape maintenance, refuse collection and truck loading/unloading activities.
- D. Estimate existing and projected (20 years) noise levels and compare those levels to the adopted policies of the Noise Element. Projected future noise levels shall take into account noise from planned streets, highways and road connections.
- E. Recommend appropriate mitigation to achieve compliance with the adopted policies of the Noise Element, giving preference to proper site planning and design over mitigation measures which require the construction of noise barriers or structural modifications to buildings which contain noise-sensitive land uses.
- F. Estimate noise exposure after the prescribed mitigation measures have been implemented.
- G. Describe a post-project assessment program which could be used to evaluate the effectiveness of the proposed mitigation measures.

CALIFORNIA GENERAL LAND USE MAP

Approved: Planning Commission

Oversized Map or Foldout not scanned.

Item may be viewed at the
Institute of Governmental Studies Library, UC Berkeley.



28K-90W

9 X 12

U.C. BERKELEY LIBRARIES



C124912186

